Title: Prioritizing People at Rice and Larpenteur

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# Prioritizing People at Rice and Larpenteur

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MetroTransit

Title page image: Nicollet Mall Light Rail Station, looking East from South 5th Street.

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# Executive Summary

Metro Transit's Transit Oriented Development (TOD) Office was established to support TOD throughout the Twin Cities metropolitan region. In anticipation of an expanding regional transit system, the TOD Office sets the best TOD design standards for developers, municipalities, and communities. Managing these controls requires an understanding of land allocation in these sites. This information can help to determine whether or not current and potential developments will be successful in the future, can be used in education efforts regarding TOD, and can contribute to future TOD site selection.

The objectives of this report are to understand land allocation at transit nodes throughout the region; analysis will identify the components that led to successful TOD in the region, and provide site-specific recommendations for TOD at the intersection of Rice Street and Larpenteur Avenue

The Existing Conditions section examines the regional context for transit-oriented development in the Twin Cities metropolitan area. Specifically, we look at the history of TOD in the Twin Cities, identify factors contributing to a successful TOD based on qualitative and quantitative research, and explore the TOD policy in local and regional comprehensive plans. Based on the information found in these points, seven existing/proposed transit nodes in the Twin Cities region were selected. Each node's current conditions and development potential was analyzed. Furthermore, each node's vehicles, buildings, and people spaces were determined to create a ratio. The analysis concluded that there is no 'golden standard' for the land allocation. The ratio still has a purpose. The vehicle-building-people land ratio is an educational tool and conversation starter.

Based on the findings from the Existing Conditions, the Action Plan proposes site-specific recommendations for the neighborhoods that meet at the Rice and Larpenteur intersection. Given that spaces for vehicles dominate the site of Rice and Larpenteur, we develop a set of action plans to sponsor a more human-centered, rejuvenated, and sustainable development in the area. Within the action plan, we developed a set of strategic goals and policies. These are broken up into the following sections: community now and the community later, transportation, and economic development.

The report findings are in the following sections:

1. Existing Conditions:
Maps of the land allocation metric within the seven selected nodes
2. Action Plan:
Policy recommendations for the site at Rice and Larpenteur broke down into three subsections:
Community Now/ Community Later
Transportation
Economic Development

# Introduction

The Transit Oriented Development (TOD) Spring 2017 Capstone study analyzes and identifies the components that contribute to successful TOD sites on high-frequency transit routes in the Twin Cities region. The foundation of this work is the simple division of people, building, and car space, a method first pioneered by the Cuningham Group in the City of Hopkins, Minnesota. This study layers qualitative and quantitative data that articulate analytical nuance, community conditions, and policy. This project integrates Metro Transit's TOD overarching goals of maximizing the development impact of transit investments, supporting regional economic competitiveness, advancing equity in terms of affordable housing and job access, and supporting a 21st century transportation system.

To guide our study, several high-level research questions were established to frame the investigation. The research questions address the possibility of using the aforementioned ratio to compare one TOD site to another, the potential challenges and opportunities involved in this metric, and the need to understand the regional climate in terms of TOD development.

# Opportunity Statement

**In the Twin Cities, there are few, if any, examples of TOD that were once suburban strip malls. Potential for this type of development exists at the intersection of Rice and Larpenteur. To move from today into tomorrow, planners must interpret the node's existing conditions and identify innovative solutions to foster TOD. A baseline tool used in this report was a ratio borrowed from the Cuningham Group. Within a given space, the ratio measured the proportion of vehicle, building, and people areas. Only used once before, it was unclear whether this ratio could have greater meaning. This report applied the ratio at the Rice and Larpenteur intersection in addition to six other sites across the region. This process provided answers to the research questions on the following page.**

# Research Questions

## 1. What are the components that make the ratio of people, buildings, and cars?

Inherent in this question is the need to define what goes into a ratio. If that can be determined, we will have a semi-objective way of comparing one TOD site to another. We also recognize that what might be 'good' in one place could be 'bad' in another. To overcome this, we plan to compare TOD sites across the Neighborhood Typologies identified in Metro Transit's Developer Guide[1]. Those are urban core, urban center, urban neighborhood, town center, and destination hub.

## 2. What is this ratio missing? What issues is it simplifying/ignoring that could contribute to/ subtract from a TOD site? What are the pros and cons of the simplified metric?

While a simplified metric could lead to a potentially useful tool for predicting TOD success, the simplification of the metric is bound to leave out important factors. What are those important factors? And is the metric only a few tweaks away from something useful.

## 3. After potentially strong TOD sites are identified, what kinds of recommendations will be given to advance the site through development? How will we accomplish this?

An underlying question is what are the barriers to TOD development now? While we can surely create a long list of policy recommendations to support TOD development, it would be more prudent to consider the economic and political realities in our region.



1 Metro Transit. "A Developer's Guide to Transit Oriented Development." 2015, https://www.metrotransit.org/tod-developer-tools-and-resources.


An example of space allocated for cars. Rush hour on 1-94.

An example of TOD in the Twin Cities: Green Line LRT train at University Ave and Hampden Ave in  Paul

# Regional Context

# Existing Conditions

## Literature Review

The literature review is divided into five essential sections. First, the Twin Cities' context is briefly acknowledge. It is important to acknowledgement that the Twin Cities has a history of communities built on street car lines, but has since shifted to a somewhat sprawling car-centric landscape. Second, the review examines literature that prioritizes quantitative analysis. Third, there is literature that expands the discussion by placing a heavy emphasis qualitative data. Fourth, TOD is often used as a means to achieve goals such as reduced vehicle miles traveled and CO2 emissions. Finally, this review examines TOD policies in local and regional comprehensive plans.

## Twin Cities Context

In the early 20th century, a web of streetcars crisscrossed the Twin Cities Metro area. The Twin City Rapid Transit Company (TCRTC), founded in 1875, built a public transit system that offered service throughout Minneapolis and Saint Paul neighborhoods[2]. The system was lauded as one of the best in the country through the first half of the 20th century[3]. At the system's height in the 1920s, the system had "over 500 miles of rail, stretching from Stillwater to Lake Minnetonka, and from Anoka to Hastings."[4] With electric speedy engines and a wide dispersal of tracks, many residents of Saint Paul and Minneapolis had only to walk a few blocks to catch a streetcar. The streetcar eventually gave way to the bus and automobile in the 1940s and early 1950s. The design of neighborhoods built on a short walk to transit remained.

Today, Metro Transit's growing bus and light rail service is much faster and expansive than the original streetcar system. However instead of leading development like the streetcars did, the system is navigating an environment largely built on the automobile. The most recent 2011-2015 American Community Survey commute mode share data estimate found that 73.4 percent of Hennepin County

2 John Jager (1871-1959)[1] for the Twin City Rapid Transit Company (photo of original taken by Bobak Ha'Eri) - This watercolor was, according the posted display "Drawn and exhibited by the Twin City Rapid Transit Company; it is currently located in the Minneapolis Central Library, 4th floor.

3 Date, Steve. "Our Street Car Lines-- yesterday and today." Minnpo May 10, 2012. (Accessed May 5, 2017). https://www.minnpocom/view-finder/2012/05/our-street-car-lines-%E2%80%94-yesterday-and-today.

4 ibid.

and 74.2 of Ramsey County drive to work by themselves[5]. There are a variety of reasons why people to choose to drive. For many, there might not be a competitive alternative mode of transportation.

To address this rate, Metro Transit, the Cities of Minneapolis and Saint Paul, and other partners have enacted complete streets policies, designed TOD design standard guides, and an assortment of other actions to promote more walkable, transit-oriented living. While these efforts have made an impact, there are plenty of untapped opportunities. This capstone project will attempt to engage some of these opportunities.

Throughout this process, we believe that it is important to keep the past in mind. While today's TOD favors density over the single family-detached streetcar suburbs of old, there are still lessons to be learned. Orient buildings and people spaces away from parking lots and towards sidewalks, parks, and transit. Making this shift will go a long way in fostering positive and welcoming places for people to live. This is not revolutionary. We've already done it.

## Quantitative Approaches to TOD

Literature on TOD around the country and the world delve deeply into the components that support successful developments. Whether it be geography, demographics, transit service frequency or surrounding attractions, the literature concludes that the right combination of these variables and others will determine the fate of a TOD site. Moreover, what worked in one place, might not work in an another. Therefore, TOD planning demands attention to detail, innovative thinking, and an ability to see the big-picture.

To wield an innovative approach, there are a variety of studies that relied heavily on quantitative data to arrive at conclusions. For instance, the Austin, Texas Capital Metropolitan Transportation Authority released a report entitled "TOD Priority Tool: A Resource for Identifying TOD Opportunities to Support High-Capacity Transit" in the Summer of 2016. The report identified parameters to prioritize TOD development sites along high-capacity transit lines. The tool studies areas within a half-miles radius of transit lines to find how land use decisions and transit systems contribute to the readiness of a TOD site. The report classifies TOD sites into five geographical areas: "Central Core, Regional Hub, TOD Village, Neighborhood TOD, and Special Destination."[6] Drawing these distinctions are important because TOD that works in the urban core functions differently than

5 American Community Survey 5-Year Estimates S0801: COMMUTING CHARACTERISTICS BY SEX 2011-2015, (Accessed February 2017).

6 Capital Metropolitan Transportation Authority (Austin, TX). "TOD Priority Tool," http://www.capmetro.org/uploadedFiles/Capmetroorg/FuturePlans/Transit-OrientedDevelopment/CapMetro-TOD-Priority.pdf, p. 7.

it would in a community of single family detached houses. Using the geographical areas, the report applies a set of parameters to identify readiness. These parameters are connectivity, market strength, available land, and government support.[7] While these factors help to prioritize sites, the report recognizes that "TOD is not a one-size-fits-all idea" and that the Tool is simply an "analytical framework that helps to recognize how individual stations are alike, how they differ, and what they need to attract transit-oriented development."[8]

Another examples of this quantitative heavy approach is the "Performance-Based Transit-Oriented Development Typology Guidebook" published in December 2010.[9] The intent of this guidebook is to identify the different conditions that exist in places that dictate how TOD forms. The Guidebook incorporates case studies from Los Angeles, Chicago, Dallas, Pittsburgh, San Francisco, Portland, New Jersey-New York Tri-State region, Atlanta, Washington D.C.. Within these forms, the Guidebook evaluates zoning and policy standards pertaining to the number of miles each household within half mile will travel in a year, land use mixture, and the neighborhood scale of ½ mile around transit stations. The results of this study found that development concentrated around transit stations often boasted lower rates of auto ownership, higher usage of alternative forms of transportation such as walking, transit, biking, and increased density. The Guidebook recommended that new TOD, regardless of place type, can help reduce vehicle miles travelled (VMT), especially in areas where it is higher than the regional average.[10] In particular, areas with high VMT levels that are also served by strong public transit systems can see significant reductions in average household VMT with only a moderate amount of new development. Nevertheless, prioritizing TOD in areas with low VMT and strong public transit will yield the largest reductions in VMT on average.

## Qualitative Approaches to TOD

While the Austin, Texas example is useful in seeing how to gage potential to maximize TOD development, the Mineta National Transit Research Consortium's report "Measuring Benefits of Transit Oriented Development" takes a more social science perspective. Specifically, the Mineta study evaluated TOD benefits throughout

7 Ibid, p. 5.
8 Ibid, p. 6.
9 Center for Transit-Oriented Development. "Performance-Based Transit-Oriented Development Typology Guidebook." December 2010. http://www.cnt.org/sites/default/files/publications/CNT_TODTypologyGuidebook.pdf.
10 "Vehicle miles traveled (VMT) per capita is calculated as the total annual miles of vehicle travel divided by the total population in a state or in an urbanized area. Data for this indicator come from the Federal Highway Administration (FHWA)" - United States Department of Transportation. "VMT Per Capita."https://www.transportation.gov/mission/health/vmt-capita (Accessed April 6, 2017).

New Jersey in terms of the following metrics:[11]

- Perceptions of residents and those involved with the development process
- Frequency of walking, transit use, and driving
- Social capital and civic engagement
- Self-reported health
- Pedestrian, bicycle, and vehicle casualties
- Average residential property value
- Out-of-pocket and travel time costs
- Regional congestion costs and other external costs

The Austin study, on the other hand, includes similar factors such as the frequency and ease of transit service under connectivity, most of the report thinks about TOD from a land use, real estate, infrastructure perspective. The usefulness of thinking about TOD in terms of the variables like pedestrian/bicycle casualties and physical health is because it focuses on the central goal of TOD-- to improve people's quality of life. While there are market trends, best practice designs, and formulas to perfectly arrange a TOD site, those tools must be balanced by the human experience.

Another way to evaluate sites for TOD is to qualitatively examine a site's "readiness" for TOD. The report "Understanding Opportunities for Transit Oriented Development: An Analysis of Readiness" uses a 3-tier system to rank 20 measures of readiness for TOD to happen on a site.[12] These measures are divided into four categories of existing conditions: policy, market, physical, and social. The three tiers of scoring are: conditions in earliest stage of development, conditions moving toward TOD, and conditions supportive of TOD. The metrics are easy to use by a wide audience, and the tool outputs are visual diagrams illustrating the readiness of a site based on these four categories. The example summary output, for a transit station area in Central Florida, also includes strengths and weaknesses of the site, and strategies and next steps for TOD on the site based on the four categories.

## Additional Benefits of TOD

Many TOD projects are often justified and/or support through initiatives to reduce issues such as vehicles miles traveled and CO2 emissions. The "Transit Cooperative Research Program Report 102: Transit-Oriented Development in the United States: Experiences,

11 Mineta National Transit Research Consortium. "Measuring Benefits of TOD". October 2014, 2

12 Florida TOD. "Understanding Opportunities for Transit Oriented Development: An Analysis of Readiness," http://planfortransit.com/wp-content/uploads/2016/01/Example-Summary-Output-Delray.pdf, (2015).

Challenges, and Prospects" published in 2004 explores the opportunities that TOD create. Among the many benefits the report mentions, here are a select few:

**Opportunities for Affordable Housing**
TOD creates opportunities to take advantage of "locational efficiencies."[13] By living in a TOD site, residents will likely be able to save on personal automobile costs, if not become car-free all together. A side effect of a decreased need in an automobile is a reduce necessity for parking. If a TOD developer can save on not having to construct parking spots, the savings will be passed on to the residents.

**Less Traffic Congestion and Other VMT-Related Cost**
A contested claim is that TOD can lead to a reduction in VMT and congestion. The logic is rather straightforward. If TOD can allow some individuals to reduce the number of trips taken by car, there will be less cars on the road resulting in less congestion, VMT, and travel co A Texas Transportation Institute study estimated "that traffic congestion costs the nation $68 billion in time delay and extra fuel consumed per year, wasting 3.6 billion hours and 5.7 billion gallons of fuel."[14] The degree to which these benefits occur depends on a variety of variables such as proximity of the residence to the transit station, ridership, ease of access to jobs and destination, etc.

**Reduce Sprawl and Space Conservation**
TOD encourages compact and high density development. The results of which is less need to expand and utilize farmland for new fringe development. Studies have indicated that sprawling development landscapes can take up 10 to 40 percent more land than that of compact areas.[15] Furthermore, two additional advantages that comes with more compact development are less permeable surfaces and a reduction in automobile pollution infiltrating stormwater runoff.

Successful TOD depends on a system of factors working together. The literature identified many of these factors, such as transportation, a wide variety of housing types, and employment opportunities. To think about how these apply at the intersection of Rice and Larpenteur, a qualitative and quantitative approach must be used.

Using those lens teases out several essential factors:

- When it comes to the Twin Cities, the historical context of the

13 Transit Cooperative Research Program Report 102: Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects, 125.
14 G. Sciara, "Traffic Congestion: Issues and Options" (conference summary, Conference on Traffic Congestion, Washington, D.C., June 26–27, 2003).
15 J. Landis, "Imagining Land Use Futures: Applying the California Urban Futures Model," Journal of the American Planning Association, Vol. 61, No. 4 (1995): 438–457.

region matters. The area is no longer the walkable streetcar suburbs of old. Spotted across the area are strip-mall parking lots and intersections like Rice and Larpenteur. To make Rice and Larpenteur a viable TOD site, the literature suggests that the intersection will need to be integrated into the region through competitive and reliable transportation systems.
- The demographics of the neighborhoods that form the intersection are essential to determining the right community investments.
- Questions remain concerning resident automobile usage: what will it take for someone to live car-free or car-lite at the Rice and Larpenteur intersection? Seeking to achieve this outcome will undoubtedly reduce vehicle miles traveled and CO2 emissions.

Tactically addressing these big questions from a qualitative and quantitative approach bodes well for critical and conscientious solution identification.

## TOD Policy in Local and Regional Comprehensive Plans

As part of our research, we reviewed the most recent comprehensive plans of local and regional municipalities. We sought to determine policy goals and guiding principles in the area that could help inform our recommendations.

**Metropolitan Council**

The Metropolitan Council recognizes that transit can and should act as a "catalyst" for development in the Twin Cities. Strategy 4d of the 2040 Transportation Policy Plan states that rail and bus systems can help facilitate development in residential and employment nodes along transit corridors. The Met Council generally does not regulated land use policy, but it is committed to helping cities create "comprehensive plans, zoning and community development strategies, including parking policies"[16] to encourage higher density development along transitways and arterial bus routes. The Met Council also recognizes the link between transit and local land uses in both economic development and in achieving regional transportation goals. This link is most effective at transit centers and stations; these facilities can help cities achieve efficient, pedestrian and bicyclist-friendly development and redevelopment. Met Council's Transportation Policy Plan does not contain a discussion of what TOD looks like, or design principles cities and counties should follow to achieve successful TOD projects.

16 Metropolitan Council, "2030 Transportation Policy Plan," 2010, strategy 4d p. 10.

**Metro Transit**
Metro Transit, the primary transportation operator of the Twin Cities and a division of the Metropolitan Council, also clearly understands the great importance and positive potential of TOD in the region. In their TOD guide for developers, the agency lays out the definition of a TOD and how this sort of development differs from traditional "car-oriented development around transit"[17]; the benefits of investing in TOD[18], what makes a good TOD[19], as well as the subtleties surrounding TOD funding.[20] Although the document is geared towards educating developers on TOD, it serves as a good resource for anyone who wants to learn more about TOD in the Twin Cities.

**Hennepin County**
Hennepin County's Transportation Plan commits the county to helping cities with "station planning, park and ride, and land use."[21] One important component to the county's work is ensuring transit stations have integrated pedestrian and bicycle facilities and connections. The Transportation Plan also expresses support for TOD in general, especially where investments have been shown to have significant benefits. Similar to Met Council's Transportation Policy Plan, Hennepin County's Transportation Plan lacks a robust discussion of design principles for TOD, or specific evaluation criteria of what makes TOD successful.

**Ramsey County**
Ramsey County's Comprehensive Plan contains strong but general commitments to encourage development that serves pedestrian, bicyclists and transit users.[22] The Hiawatha line is cited as one example of successful transit planning and development, and Union Depot in downtown Saint Paul is one location called out for continuing development and improvement. Again, because Ramsey County does not exercise land use controls like city governments, their Comprehensive Plan contains little specific language around land use, urban design, or TOD.

**The comprehensive plans of the cities of Maplewood, Roseville, and Saint Paul that form the Rice and Larpenteur intersection gave more detailed guidance for TOD then the regional government documents.**

17 Metro Transit. "A Developer's Guide to Transit Oriented Development." 2015, https://www.metrotransit.org/tod-developer-tools-and-resources, p. 1-2.
18 Ibid, 3-4.
19 Ibid, 5-9.
20 Ibid, 11.
21 Hennepin County, "2030 Comprehensive Plan Update," June 2011, goal 3, p. 5-3.
22 Ramsey County, "2030 Comprehensive Plan," November 2009, p. B-5.

**Maplewood**

Maplewood's Land Use chapter has a goal of encouraging "more intense development and redevelopment along existing transit corridors."[23] Maplewood recognizes the need for higher density development when transit stops are added to arterials, and that this land use goal can support greater economic development in the city. Maplewood cites its "land use and regulatory powers"[24] as one tool to guide development to transit stations and destination nodes. These transit nodes are to be designed to support pedestrian activity through access and amenities, such as public art, wayfinding signs, appropriately-scaled lighting, and architectural details at the human scale. This pedestrian-friendly design should also complement and blend in with the surrounding neighborhood character. The Maplewood comprehensive plan highlights the importance of the city partnering with other agencies to achieve these TOD goals.

**Roseville**

The Roseville Comprehensive Plan explicitly calls for the city to "promote and support transit-oriented development and redevelopment near existing and future transit corridors."[25] This plan highlights some of the benefits of higher densities in new residential development, including reduced housing costs, improved affordability, and better access to transit stops. Commercial development will also have increased multimodal accessibility, and the plan calls for transit stops to be fully integrated into commercial development and redevelopment. The plan calls out the Rosedale Shopping Center as one example of a "transit hub."[26]

**Saint Paul**

The Saint Paul Comprehensive Plan discusses many of the benefits of TOD and higher density development. These include:

- Mitigating the increasing costs associated with climate change and rising energy prices
- Less traffic congestion through shorter and fewer non-work trips of residents of TOD
- An increase in the city's tax base through denser development
- More efficient use of public infrastructure
- Greater economic development that cateres to the "emerging labor markets of the knowledge-based economy"[27]

The plan identifies minimum densities to support transit, based on

23 City of Maplewood, "2030 Adopted Comprehensive Plan," January 2010, goal p. 5-4.
24 Ibid, p. 8-5.
25 City of Roseville, "2030 Comprehensive Plan", October 2009, Land Use Policy 2.2.
26 City of Roseville, "2030 Comprehensive Plan", October 2009, p. 4-20.
27 City of Saint Paul, "2030 Comprehensive Plan," February 2010, p. LU-8.

data from the Lincoln Institute of Land Policy: 15 units per acre for frequent bus service and 50 units per acre for a walkable community with transit use. Saint Paul's comprehensive plan also identifies types of neighborhoods and corridors that benefit from TOD. Neighborhood Centers[28] are mixed use intersections with compact development, good transit access, and plentiful public amenities. These centers contain businesses that serve the neighborhood around them, rather than city or regional markets. These centers should be designed and developed with the surrounding character of the established neighborhoods they are usually located in. Mixed Use corridors are similar in design and needs to Neighborhood Centers, but are located along arterial and collector streets. Mixed Use corridors should be developed on the primary thoroughfares of the city.

The Transportation Chapter of the Saint Paul Comprehensive Plan frames TOD around the goal of increasing consumer choice in where they live and how they travel. This chapter contains several policies around strategies for increasing density and accessibility around TOD.[29] Policy 2.2 states that zoning and design guidelines should support transit-oriented design, with an emphasis on compactness, walkability, and transit use through strict enforcement of standards that promote pedestrian-centered urban and site design. Policy 2.3 discusses "creative in-fill" as a tool to increase housing densities near transit corridors. Policy 4.8 states the city should recreate the traditional street grid pattern in order to increase neighborhood connectivity whenever possible in redevelopment projects. Policy 2.8 lists ways to reduce on-street parking in new development. These factors include:

- Locating development near transit
- Provide bicycle facilities
- Shared parking
- Car-sharing facilities, rideshare, shuttle service, parking cash-out
- TDM planning
- Participate in subsidized transit programs
- "Unbundle" the price of parking for housing units

**Minneapolis**

The Minneapolis Comprehensive Plan has policies promoting higher densities and TOD in the Land Use, Transportation, and Urban Design chapters. Policy 1.3 in the Land Use chapter requires "safe, convenient, and direct pedestrian connections" between primary building entrances and the public right of way in all new development, and in redevelopment when practical.[30] This policy

28 City of Saint Paul, "2030 Comprehensive Plan," February 2010, p. LU-10.
29 City of Saint Paul, "2030 Comprehensive Plan," February 2010, p. T-10-14.
30 City of Minneapolis, "2030 Comprehensive Plan: Land Use Chapter," October

also requires high quality bicycle and transit connections and access. The Land Use chapter also defines "Transit Station Areas,"[31] (TSA) which is a land use policy centered around fixed-transit lines. TSA are defined as within a ½ mile from transit stops, although the comprehensive plan notes the greatest development potential is within ¼ mile from transit stops. TSA are designed with the pedestrian, bicycle and transit user in mind, and seek to support community development and protect the existing neighborhoods around the fixed-route stops. Development in the TSA is smaller in scale and neighborhood-focused, with businesses that cater to daily trips by pedestrians, bicyclists and transit users (coffee shop, day care, dry cleaners, small-scale grocery, flower shop). Although smaller in scale, TSA development is also described as higher density so as to support more intense transit usage, with plenty of opportunities for placemaking through public art, infrastructure and amenities.

The Transportation Chapter includes policies promoting higher density development around transit stops, as well as policy tools for encouraging multimodal development: reduced parking requirements, encouragement of employee transit incentive programs, and improved facilities. The Urban Design chapter states that TSA should have medium scale, multi-family development in order to achieve higher residential densities around transit stations. In this chapter the terms mixed use and TOD are used interchangeably, and both follow certain design criteria:[32]

- The urban design should clearly demonstrate the difference between public and private spaces
- The site design should allow for plenty of space and facilities for active pedestrian uses
- Larger scale, big box retailers can be located at TOD if they adopt traditional urban forms, either through reusing old buildings or new construction that follows traditional urban design criteria.
- Street design should focus on improved bicyclist and pedestrian features, accessibility, and amenities. Transit and bicycle parking amenities should be fully integrated into site design.
- TOD should "maximize the year round potential for public transit, biking, and walking in new developments."

In summary, the Minneapolis Comprehensive Plan uses TOD as the mechanism to reorient land uses and infrastructure around non-automobile travel. TOD facilities a greater proportion of right of way to pedestrians, bicyclists and transit users. Building form takes on smaller, more traditional and human-scale design and site layout.

2009, p. 1-4.

31 City of Minneapolis, "2030 Comprehensive Plan: Land Use Chapter," October 2009, p. 1-19.

32 City of Minneapolis, 2030 Comprehensive Plan: Urban Design Chapter," October 2009, p. 10-12.

These standards go beyond describing transit-adjacent development, to create development that both serves and is supported by transit services.

**Every comprehensive plan reviewed described the benefits of TOD. Many also gave strategies for encouraging this type of development, and some examined what TOD looks like and how it functions. These plans served as guiding documents as we conducted our existing conditions analysis and developed our site-specific recommendations for the Rice and Larpenteur intersection.**

## Stakeholder Analysis

A stakeholder analysis is useful in the field of planning, since no one entity or group is wholly "in charge" or responsible for all decisions. We needed to determine the different levels of interest and influence among different groups of people located in or related to the project area. For our project to be successful, we need to satisfy the wants and needs of key stakeholders. We therefore conducted a stakeholder analysis to determine all the actors who could be affected by our work and who would have some sort of decision-making responsibility. To determine whose interests should be taken into account throughout our project, we brainstormed a list of players and placed them on a power-interest grid. For this exercise, we looked at potential stakeholders throughout Hennepin and Ramsey county. Level of interest increases from the bottom to the top of the grid, and levels of power increases from left to right.

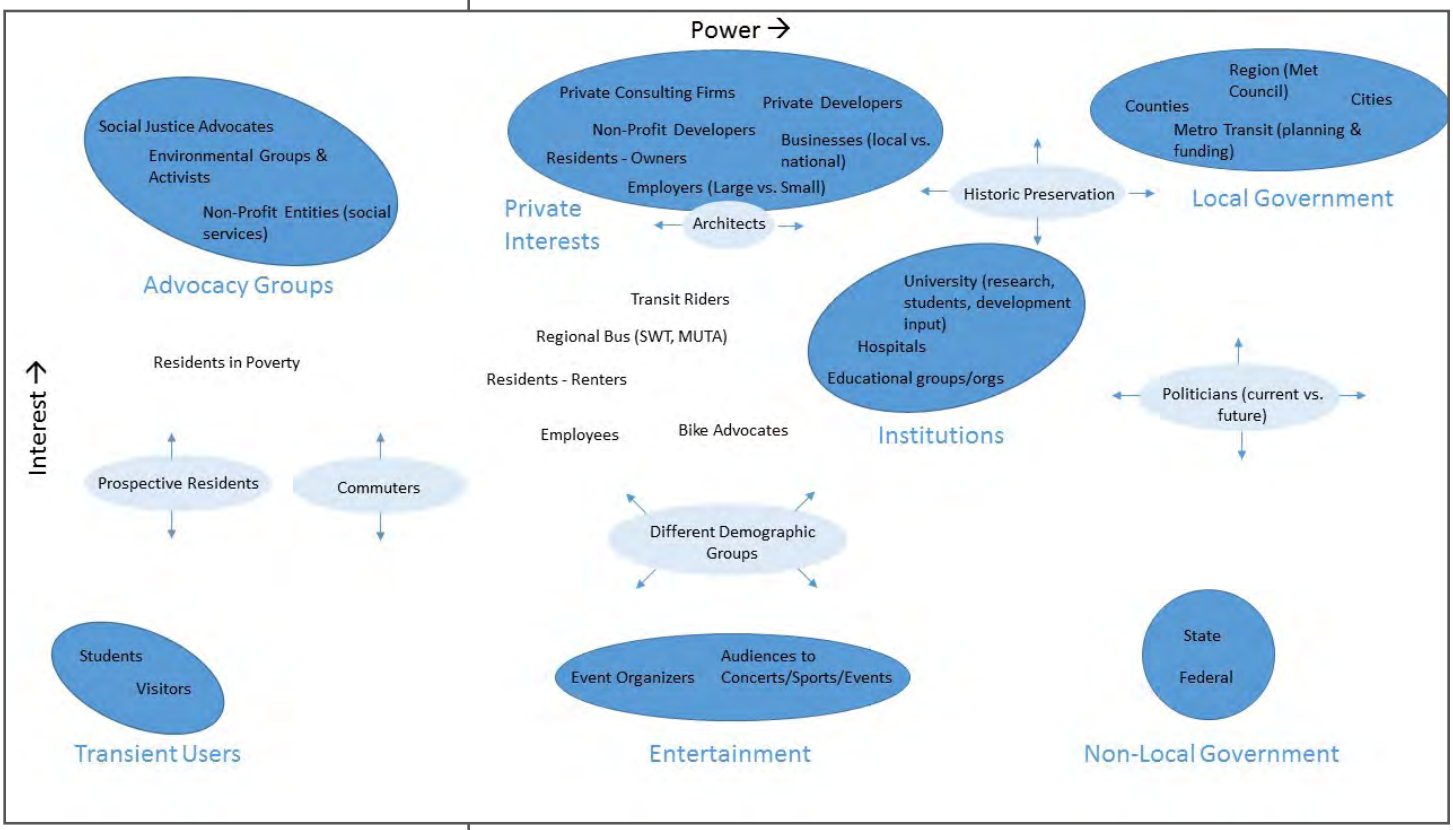
The stakeholder diagram revealed relationships and ways of categorizing stakeholders. We have developed seven stakeholder groups, along with individual stakeholders and "transient" stakeholders - individuals and groups whose power or interest in our project varies depending on specific circumstances. The larger stakeholder groups are as follows:

- Advocacy groups: social justice advocates, environmental groups and activists, and nonprofit entities (primarily focused on social services)
- Transient users: students, visitors to the area
- Private interests: private consulting firms, nonprofit developers, residents (owners), private sector developers, businesses (both local and national), employers (both large and small)
- Institutions: universities, hospitals, educational groups or organizations

- Entertainment: event organizers, audiences for concerts, sports, or other cultural events
- Local government: counties, cities
- Regional government/transportation authorities: Metro Transit, Met Council
- Non-local government: state, federal

Some stakeholder groups had positions on the power-interest grid that could change depending on specific circumstances. These include groups like architects (depending on the prestige of the project), historic preservationists (depending on potential historic resources in the project area), and different demographic groups (depending on their relative power in larger civil society. Other stakeholders did not fit into larger groups and were categorized on their own: residents who are renters or are below the poverty line, bike advocates, and transit riders.

This stakeholder analysis helps us identify formal and informal links between different groups of stakeholders. We used this analysis to determine whose interests should be taken into account at what point in the project.



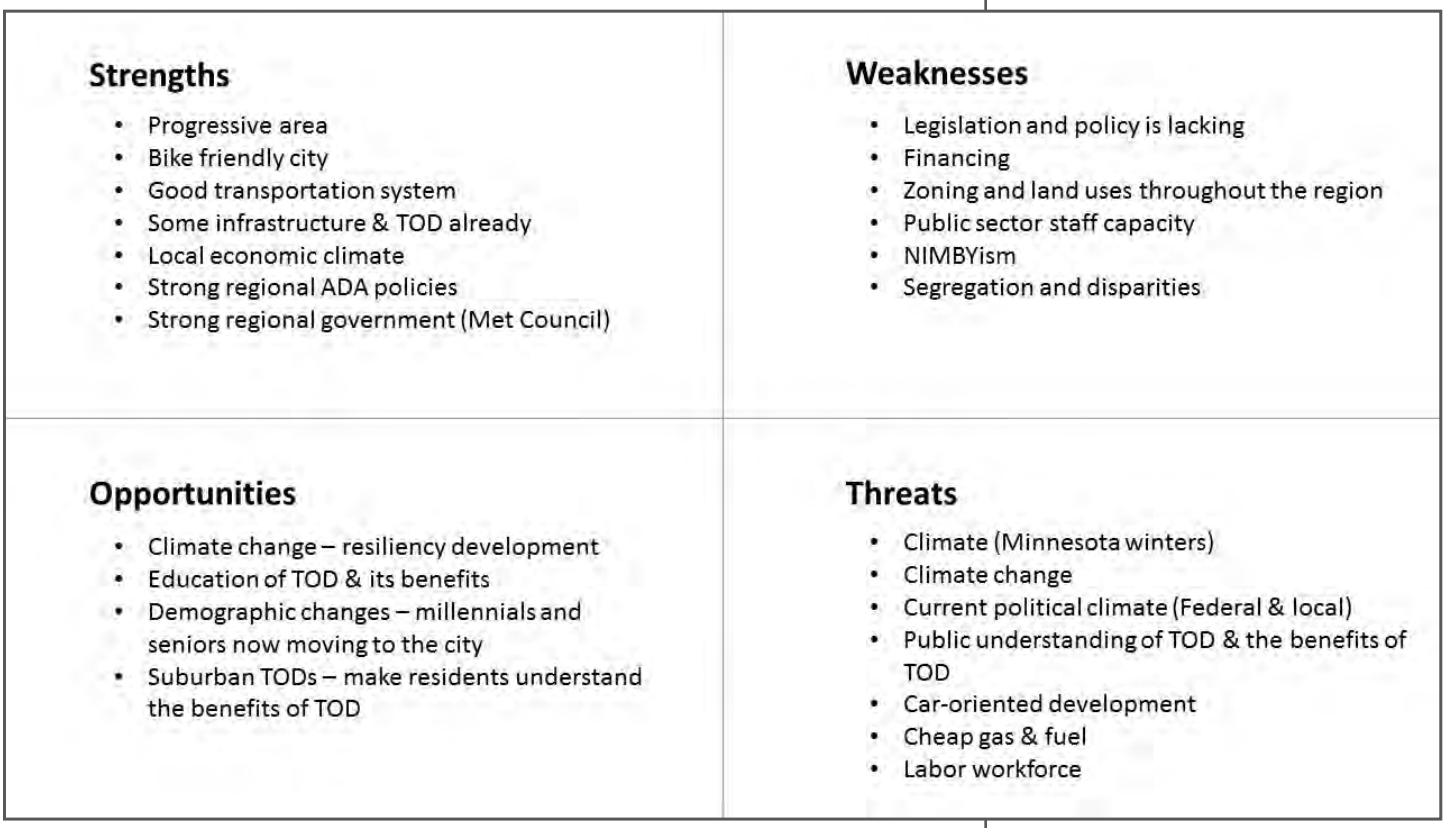
# SWOT Analysis

A Strength-Weakness-Opportunity-Threat (SWOT) analysis is used for identifying critical issues in a project. It includes both an internal analysis of an organization, and an external analysis of factors outside of the project. The analysis is made up of four categories:

- Strengths: positive characteristics and advantages of the issue, situation, or technique
- Weaknesses: negative characteristics and disadvantages of the issue, situation, or technique
- Opportunities: Factors or situations that can benefit, enhance, or improve the issue, situation, or technique
- Threats: Factors or situations that can hinder the issue, situation, or technique

The following diagram shows our SWOT analysis of TOD in the Twin Cities region:

The SWOT analysis is useful in understanding the powers that influence our recommendations for the Rice and Larpenteur intersection. The analysis clearly illustrates that there are many layers to redevelopment that extend far behind where the two roads meet. Our recommendations consider and leverage, when possible, the identified strengths, weaknesses, opportunities, and threats to TOD.



# TOD Nodes

**The range of nodes in the previous section provides a context for which to examine the potential for the land allocation metric. Nodes were selected based on Metro Transit's TOD Neighborhood Typologies as listed in the Metro Transit's Developer's Guide to Transit Oriented Development. Other considerations in node selection were current transit availability as well as the diversity of land uses within the buffer zone. At each node land use, population density, and land-to-value ratio were calculated. With these values, we developed a more comprehensive understanding of factors that may affect TOD viability. This data provides context for analyzing the results of the land allocation metric, which can be found in Section V.**

# Site Selection Methodology

To better understand how TOD manifests in the Twin Cities region, we selected seven existing/developing transit nodes across varying typologies. Besides varying geographical locations, the seven nodes exhibit a diversity of transportation infrastructure such as nearby bicycle paths, freeways, etc., and exist at different stages of planning development.

Prospect Park, Franklin Avenue, and Union Depot all have potential to grow and develop, but for the most part, they represent entirely planned and functioning TOD. All three nodes have bus service and stations on the Green Line light rail route.

Excelsior and Grand in Saint Louis Park has high-density housing and ground floor retail. Local bus service including the limited stop 114 with service to Uptown and University of Minnesota serve the node. This node will benefit from its proximity to the planned West Lake Station on the proposed Southwest Light Rail Extension.

Rosedale Mall and the intersection of Rice and Larpenteur represent nodes in suburban areas that have little to show regarding TOD development. Both have local bus service. Nevertheless, planning and discussions have begun to articulate how they will be transformed.

Finally, the Blake Road Lift Station represents a node that currently provides local bus service but has little actual TOD. It is included on this list because it will be a station along the Southwest Light Rail Extension. Once the line begins construction, the Blake Road Lift Station is primed for TOD.

## TOD Nodes

**Rice Street and Larpenteur Avenue**, Saint Paul, Minnesota (Town Center - Typology Potential)

**Excelsior Boulevard and Grand Way**, Saint Louis Park, Minnesota (Urban Center - Typology)

**Union Depot**, Downtown Saint Paul, Minnesota (Urban Core - Typology)

**Rosedale Mall,** Roseville, Minnesota (Destination Hub - Typology)

**Prospect Park**, Minneapolis, Minnesota (Urban Neighborhood - Typology)

**Franklin Avenue,** Minneapolis, Minnesota (Urban Neighborhood - Typology)

**Blake Road Lift Station**, Minnesota (Town Center - Typology Potential)

## Takeaways:

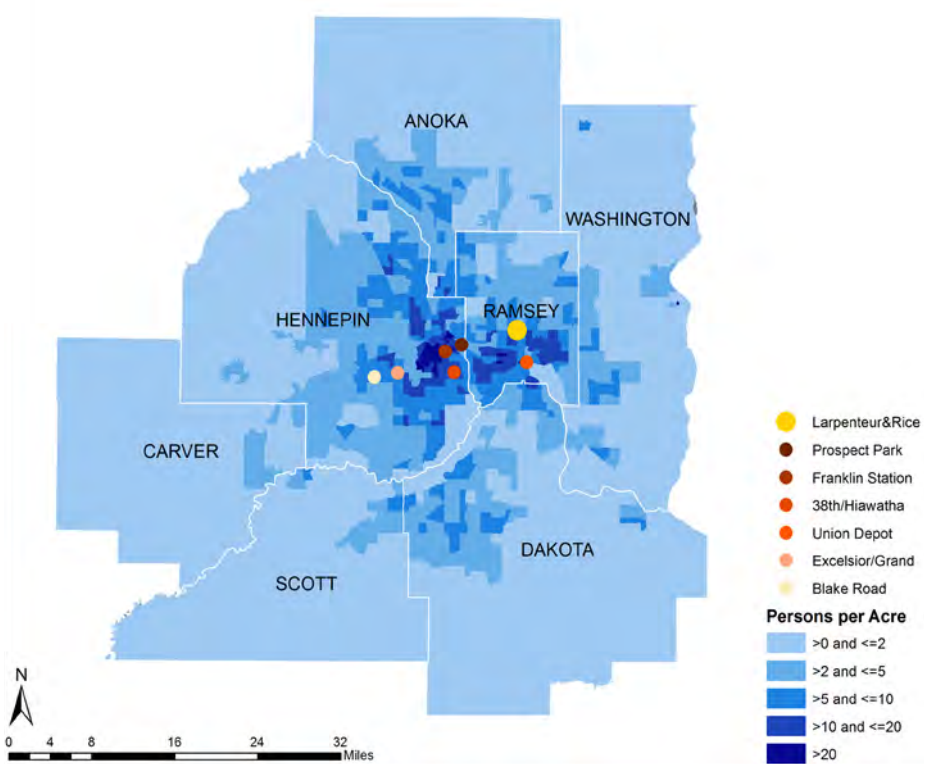
This section analyzes the existing conditions of seven nodes across the Twin Cities region. The nodes we selected vary not only in geographic location, but also in infrastructure presence and transit development status. Such selection gives us the chance to understand how TOD manifests in the Twin Cities region. Not surprisingly, the nodes distinguish from each other in terms of their land use pattern, population density, and redevelopment potential.

The seven nodes selected for this exercise differ significantly in terms of land use, population density, and land-to-value ratio. These data points help articulate the many complex issues that are involved in urban development. This data is only one side of it. Qualitative data is necessary for providing nuance and depth to the site analysis. The qualitative data for this report is presented in the forthcoming land allocation metric in Section V and practitioner interviews in Appendix A.

# Map Methodology

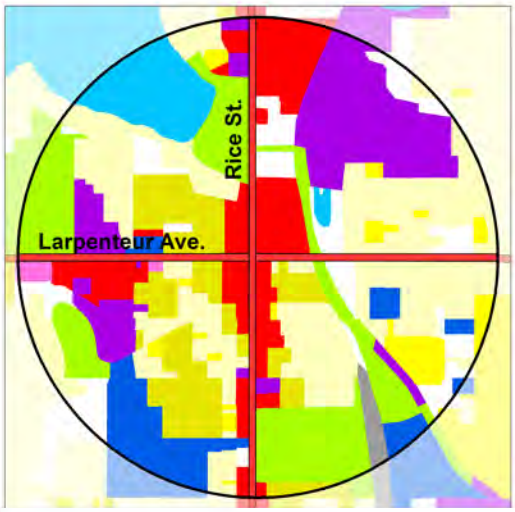
To demonstrate the existing conditions of the seven nodes in a more intuitive way, we used ArcGIS to create maps showing the demographics, land use, and development potential for each node. The demographic condition for each node is demonstrated by population density, which is calculated based on the 2015 ACS 5-year estimate at the census tract level. Land use maps are obtained directly from the Metropolitan Council 2010 General Land Use shapefiles.

Development potential, on the other hand, is represented by an indicator called **Land-to-Value** ratio. The ratio is calculated as the Estimated Market Value for Land divided by the Total Estimated Market Value, which includes Building and Land values. It is a widely accepted convention that a lender or bank would not approve loans on properties whose land-to-value ratio is more than roughly one-third. A greater-than-thirty-percent land-to-value ratio suggests the site has too much land and less space for further development. So we decided to look at the land-to-value ratios of the parcels to see the overall development potential within the half-mile buffer for each node. We did the analysis based on the parcel data from Ramsey and Hennepin County, both of which contains information for Estimated Market Values of land and the total Estimated Market Value.




Seven County Twin Cities Metro Area

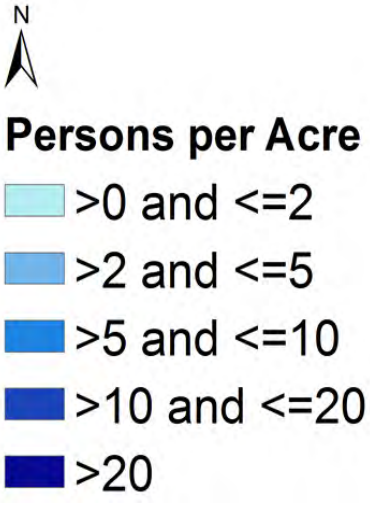
# Rice & Larpenteur

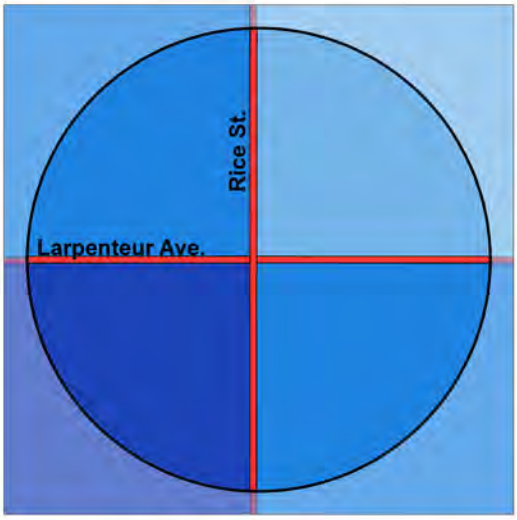




## Land Use Map

The predominant land uses within the half-mile station area include:

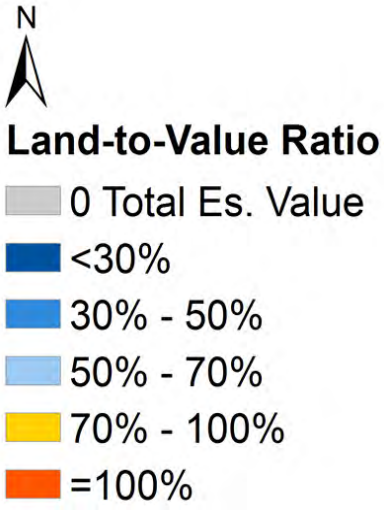
- Single family detached (25.49 percent)
- Park, recreational, or preserve (15.14 percent)
- Industrial and utility (12.92 percent)




## Population Density

The average population density within the half-mile station area is about 7 persons per acre. The southwest corner of the station area has the highest density while the northeast corner is the least populated.




## Land-to-Value Ratio

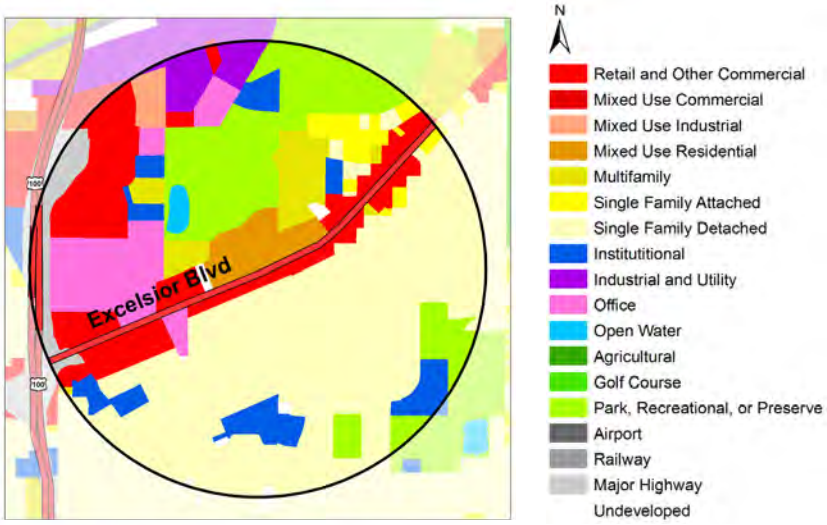
375 parcels out of 723 within the half-mile station area have a land-to-value ratio that is less than 30 percent. Parcels with a land-to-value ratio of 100 percent are mostly vacant land. **Roughly half of the land parcels have great potential for redevelopment.**

# Excelsior & Grand

## Land Use Map

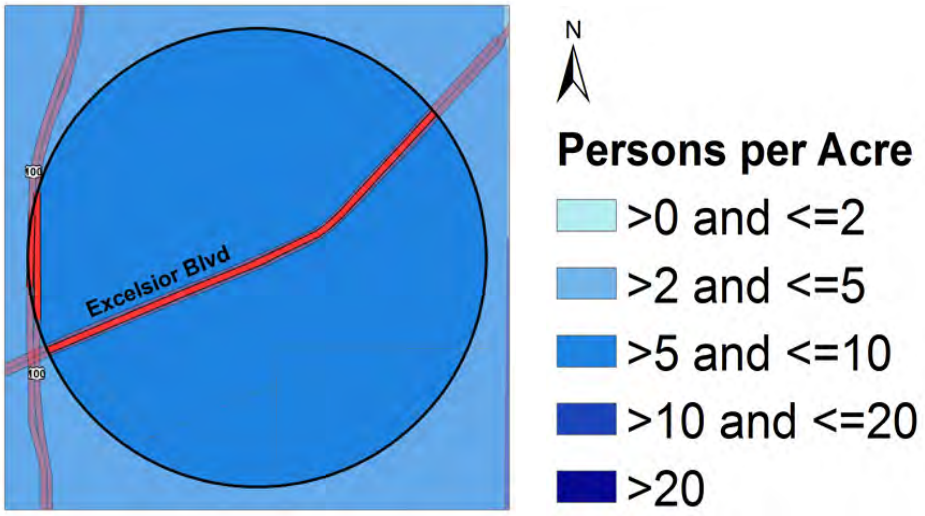
The predominant land uses within the half-mile station area include:

- Single family detached (39.71 percent)
- Park, recreational, or preserve (14.96 percent)
- Retail and other commercial (14.61 percent)



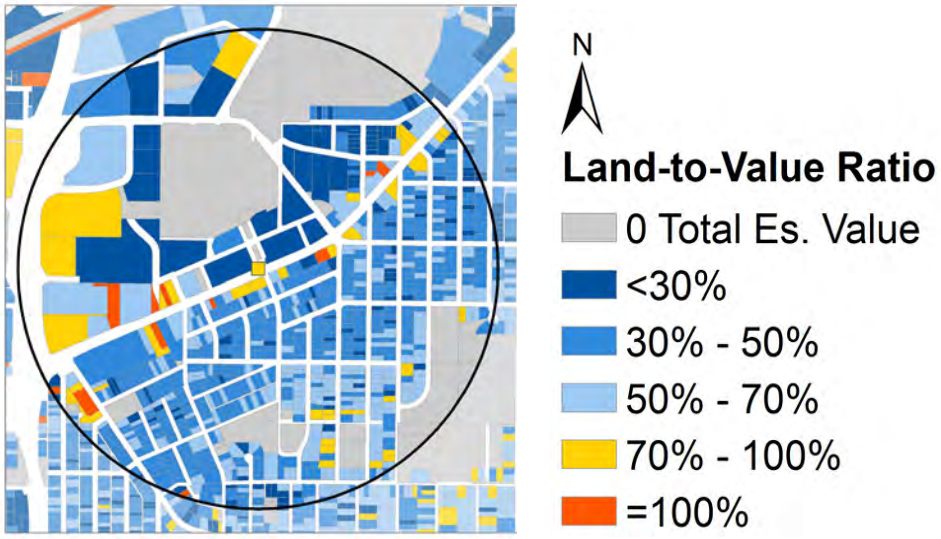

## Population Density

The average population density within the half-mile station area is about 7 persons per acre.

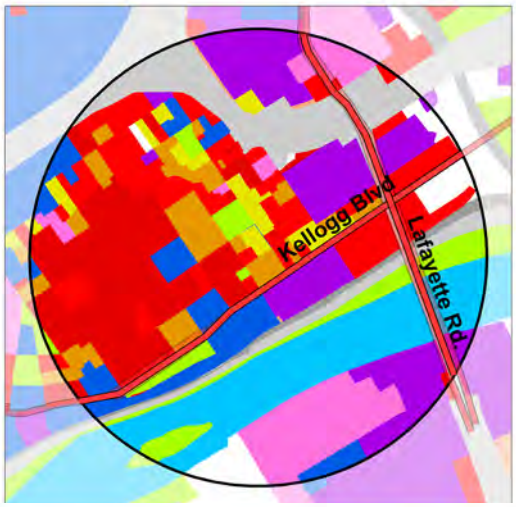


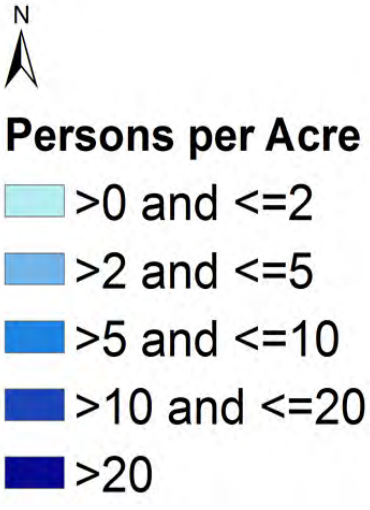

## Land-to-Value Ratio

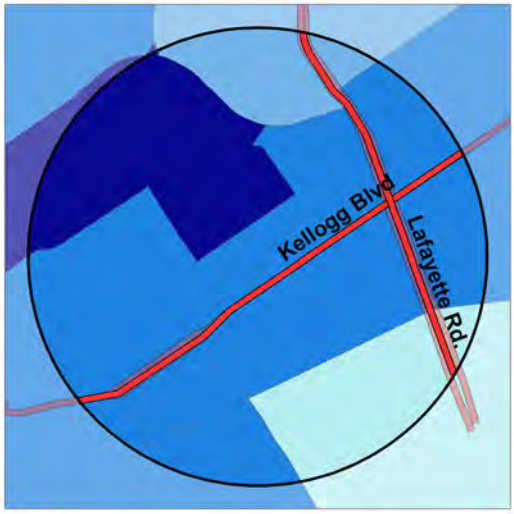
637 out of 2,038 parcels within the half-mile station area have a land-to-value ratio that is less than 30 percent. **These parcels have great potential for redevelopment and are mostly located north of Excelsior Blvd.**

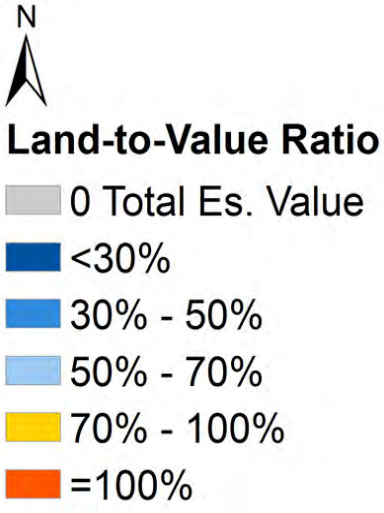


# Union Depot


## Land Use Map

The predominant land uses within the half-mile station area include:

- Mixed use commercial (14.12 percent)
- Industrial and utility (13.75 percent)
- Retail and other commercial (13.21 percent)

## Population Density

The average population density within the half-mile station area is about 6 persons per acre. A portion of a census tract with a population density of 35 persons per acre is on the northwest part of the station area, but the majority of the station area has a population density less than 7 persons per acre.

## Land-to-Value Ratio

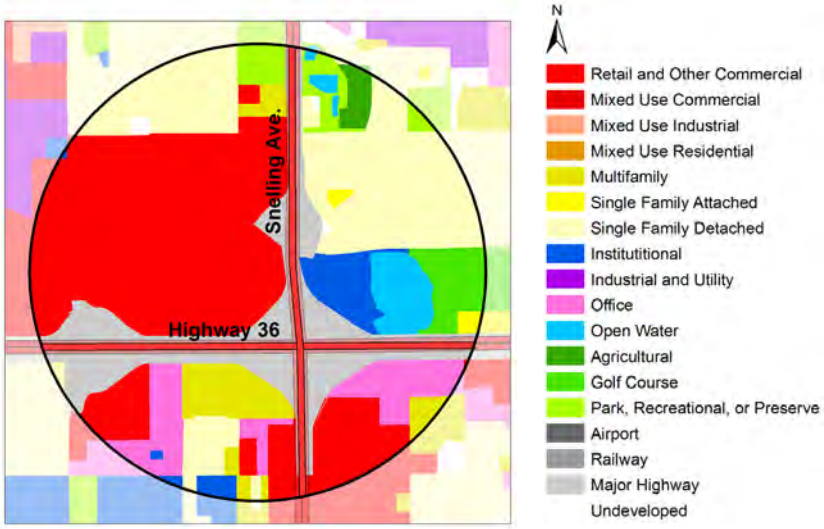
577 out of 856 parcels within the half-mile buffer have a land-to-value ratio less than 30 percent. **More than half of the parcels have potential for redevelopment.**

# Rosedale

## Land Use Map

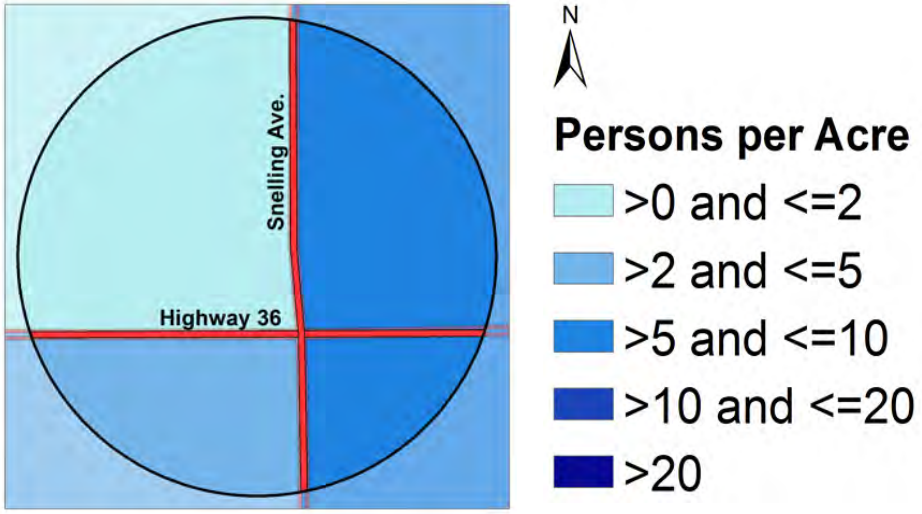
The predominant land uses within the half-mile station area include:

- Retail and other commercial (36.73 percent)
- Single family detached (20.38 percent)
- Major highways (17.84 percent)



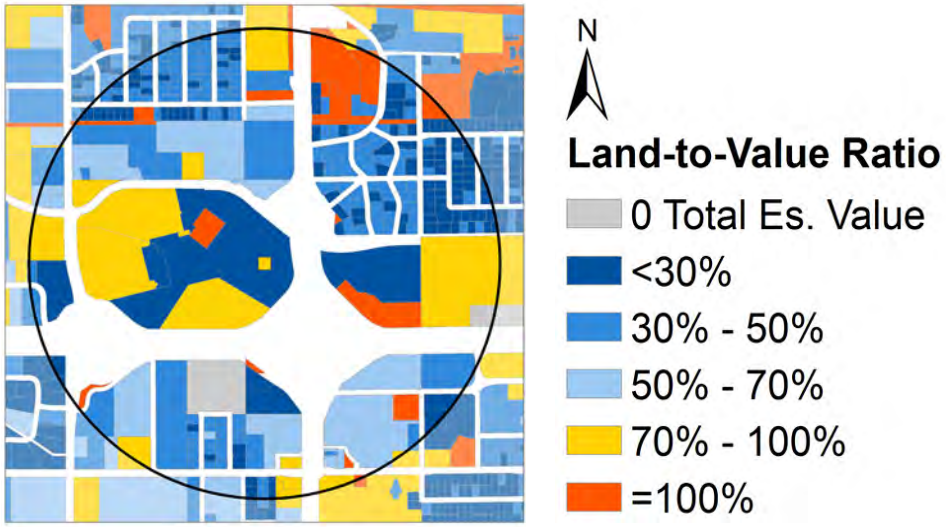

## Population Density

The average population density within the half-mile station area is about 4 persons per acre.

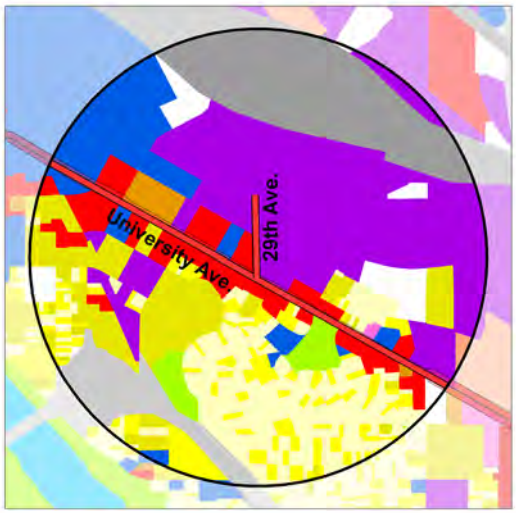



## Land-to-Value Ratio

135 out of 361 parcels within the half-mile buffer have a land-to-value ratio less than 30 percent. **Half of the parcels have have potential for redevelopment.**



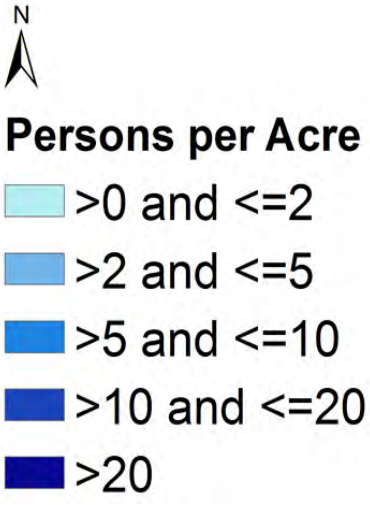
# Prospect Park

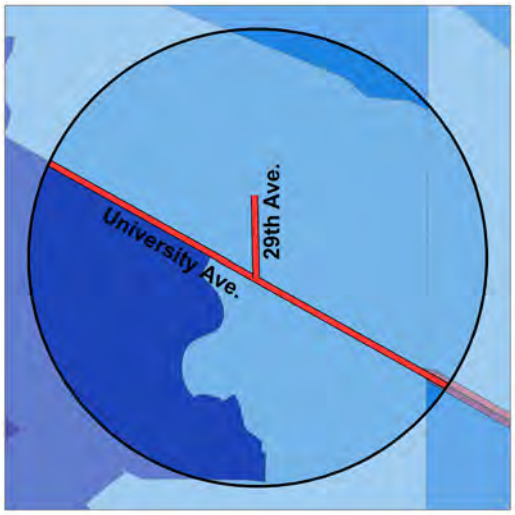




## Land Use Map

The predominant land uses within the half-mile station area include:

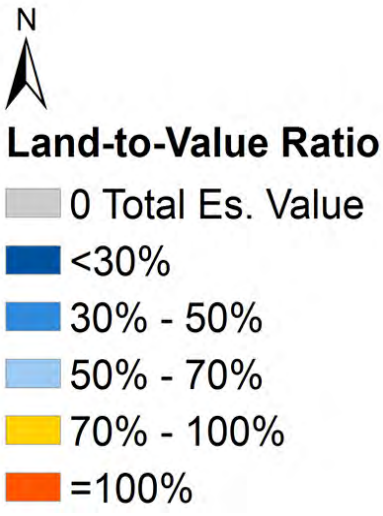
- Industrial and utility (26.83 percent)
- Single family detached (13.72 percent)
- Railway (13.57 percent)




## Population Density

The average population density within the half-mile station area is about 6 persons per acre. A portion of a census tract with population density of 17 persons per acre is on the south west corner of the station area.




## Land-to-Value Ratio

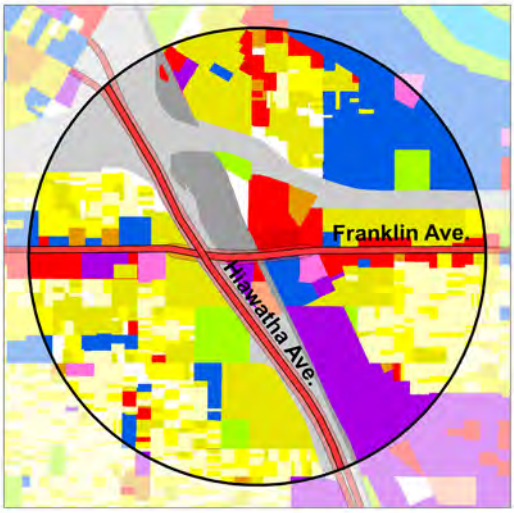
578 out of 944 parcels within the half-mile buffer have a land-to-value ratio less than 30 percent. **More than half of the land parcels have potential for redevelopment.**

# Franklin

## Land Use Map

The predominant land uses within the half-mile station area include:

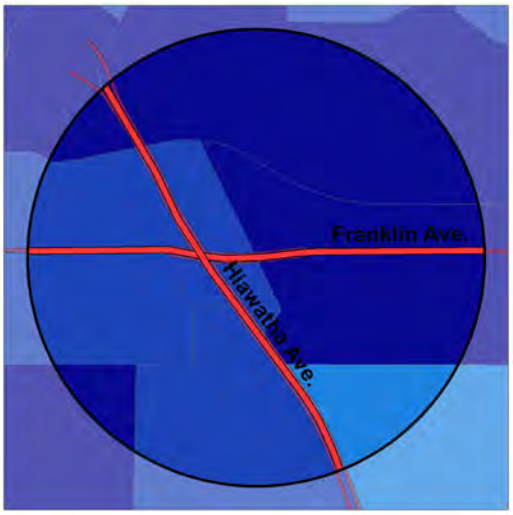
- Multifamily (20.38 percent)
- Major Highway (16.06 percent)
- Single family detached (12.16 percent)

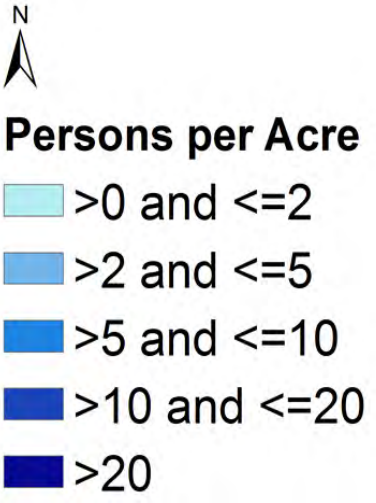




## Population Density

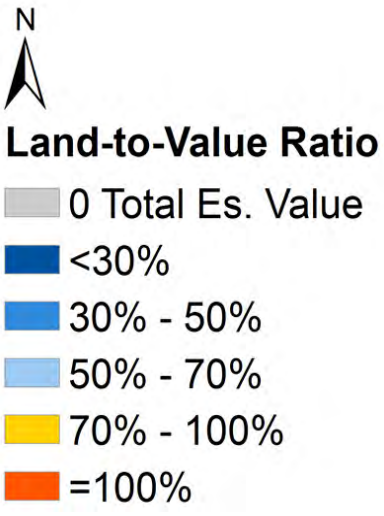
The average population density within the half-mile station area is about 18 persons per acre.



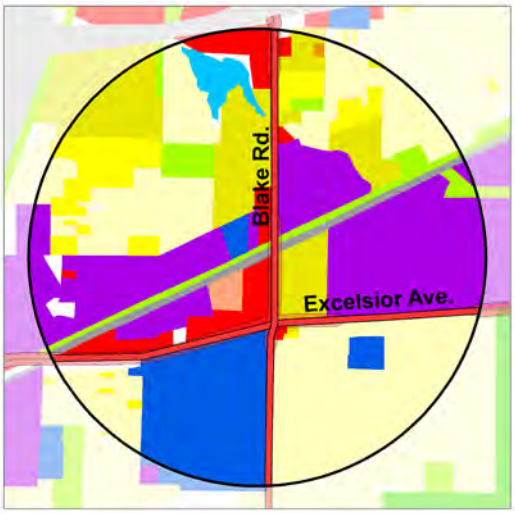




## Land-to-Value Ratio

1185 out of 1730 parcels within the half-mile buffer have a land-to-value ratio less than 30 percent. **Roughly seventy percent of the land parcels have great potential for redevelopment.**



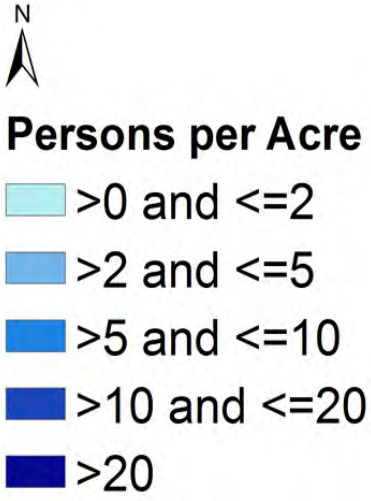
# Blake

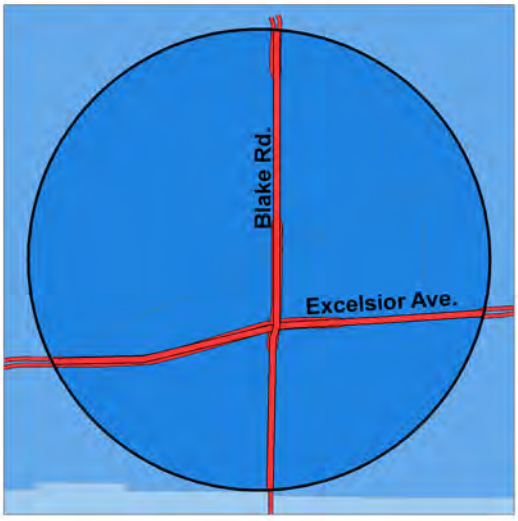




## Land Use Map

The predominant land uses within the half-mile station area include:

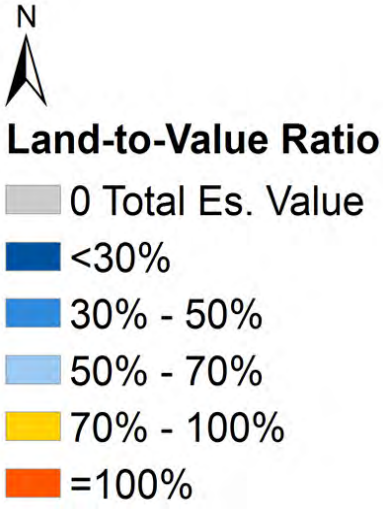
- Single family detached (30.59 percent)
- Industrial and utility (23.10 percent)
- Multifamily (12.40 percent)




## Population Density

The average population density within the half-mile station area is about 6 persons per acre.




## Land-to-Value Ratio

178 out of 832 parcels within the half-mile buffer have a land-to-value ratio less than 30 percent. **Even though only 20 percent of the parcels have great potential for redevelopment, those parcels take up a large amount of area in the buffer zone of Blake.**

# Land Allocation Metric

# Methodology

We digitized the three land categories (people, cars, and buldings) using aerial images from 2015, provided by the State of Minnesota's composite aerial photography collection. ArcMap software was used to digitize the three land allocation categories into distinct layers for the half-mile buffer zones for the nodes at both Rice and Larpenteur and the Rosedale Mall. For both of these layers, vehicle space was represented by digitizing roadways and parking lots, building space was found using building layers provided by Ramsey County, and people space were represented by digitizing both sidewalk and park space. Once these layers were manually created, their areas were calculated, and the ratios were produced.

The land allocation categories for the remaining five layers were created using Adobe InDesign software. This is the case because many layers (buildings, roads, etc.) were not readily available for Hennepin County, and due to time constraints, these layers could not be manually digitized in ArcMap. Shapes were created and placed over buildings and roadways as digital representations of the features in the real world. Due to time constraints, sidewalks were not digitized nor considered in the creation of the layer representing space allocated for people. The land allocation ratios were then calculated using these digital layers.

Thinking about-about how the vehicle, building, and people spaces relate and are balanced raises a variety of questions. Is this a typical ratio for land allocation in the Twin Cities metro region? Is there a "golden ratio" of land distribution? If these questions could be answered, the outcome could inform redevelopment and TOD planning decisions across the Twin Cities. This study applies the ratio in the seven distinct sites named in section three.

In the summer of 2016, the Cuningham Group, an architectural consulting firm, illustratively divided up the Hopkins, Minnesota downtown core into vehicle, building, and people spaces. The ratio of areas within a half-mile buffer of the center of downtown Hopkins showed that 40 percent of the space was allocated for vehicles (roadways and parking lots), 40 percent was allocated for buildings, and 20 percent was assigned to people in the form of public spaces. This distribution was thought provoking for the Hopkins City Council -- who were shocked that so much of their downtown core was dedicated to vehicles.

| Node | City | Cars - Buildings - People Ratio |
|---|---|---|
| Rice Street & Larpenteur Avenue | Paul, Maplewood, Roseville | 50 - 30 - 20 |
| Excelsior Boulevard & Grand Way | Louis Park | 40 - 40 - 20 |
| Union Depot | Paul | 45 - 45 - 10 |
| Rosedale Mall | Roseville | 70 - 25 - 5 |
| Prospect Park | Minneapolis | 45 - 45 - 10 |
| Franklin Avenue | Minneapolis | 40 - 40 - 20 |
| Blake Road Lift Station | Hopkins | 35 - 55 - 10 |

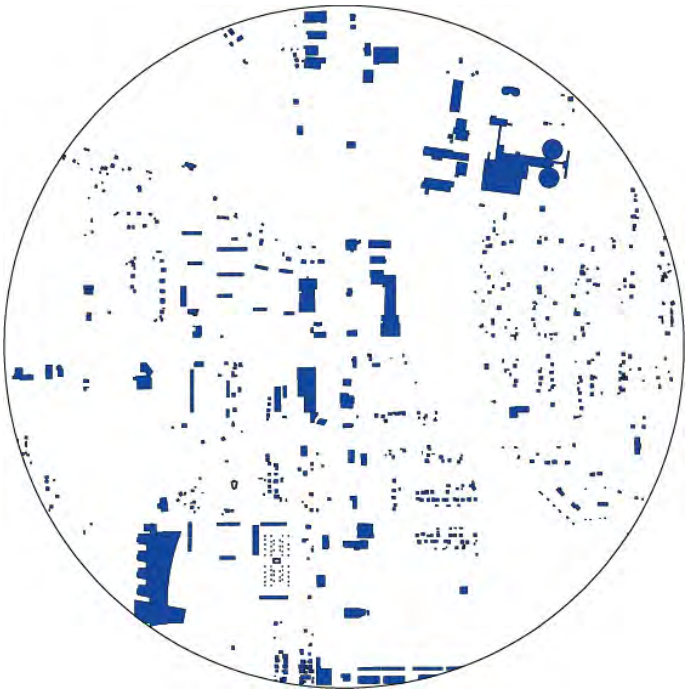
# Rice Street & Larpenteur Avenue

## Roads + Parking: 50%
## Buildings: 20%
## People (Public Spaces): 30%

The land allocation ratio within the half-mile buffer around the intersection of Rice Street and Larpenteur Avenue is somewhat similar to the other nodes studied. 50 percent of the space is allocated for vehicles: street space and parking space. The street space is fairly small and is made up of several principal arterials and many smaller residential roads and cul-de-sacs. The parking space, however, takes up a large swath of land. Much of the parking fronts Rice Street, on both the north and south sides of Larpenteur. The plentiful parking is there to support the function of the strip-mall commercial development in the area. The building space is only 20 percent of the node and is evenly distributed throughout the site. Large commercial buildings are clearly visible, as well as single family detached housing and apartments. Lastly, space for people, in the form of sidewalks and parks, represents 30 percent of the land area. Parks and green space claim a significant portion of the buffer zone. Without these spaces, sidewalk space would represent a small fraction of the land area.

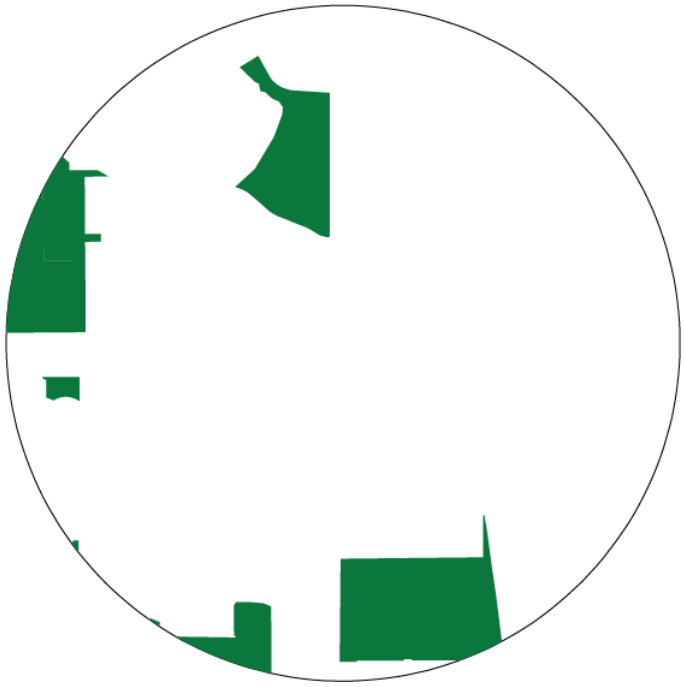
The essential takeaway from this node is that much of the site is geared towards serving vehicles. The strip-mall parking lots lining Rice support this conclusion.


Local businesses along Rice Street, Saint Paul MN

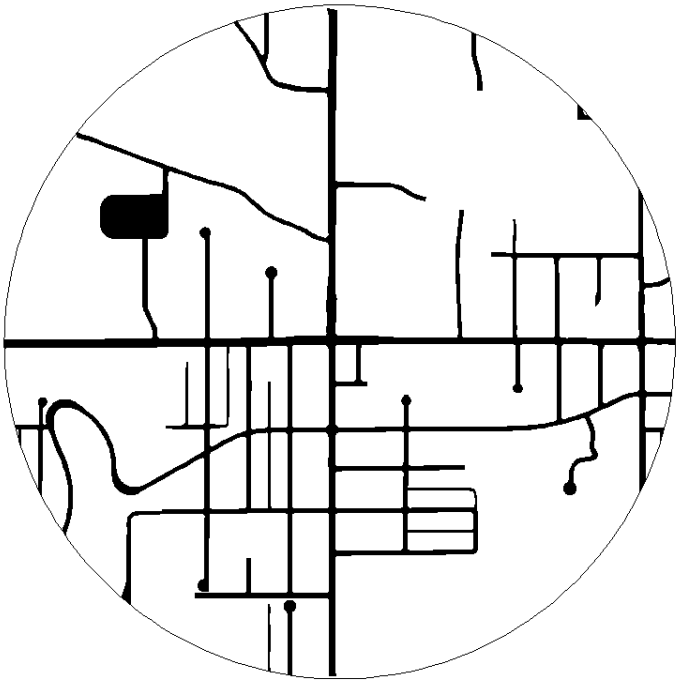


Buildings

Parking Lots (Cars)



Public Space (People)



Streets (Cars)

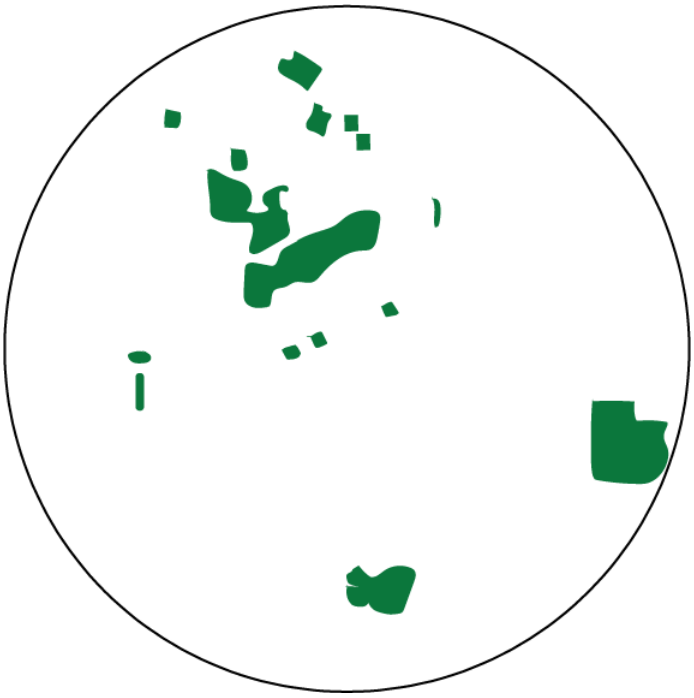
# Excelsior Boulevard & Grand Way

## Roads + Parking: 40%
## Buildings: 40%
## People (Public Spaces): 20%

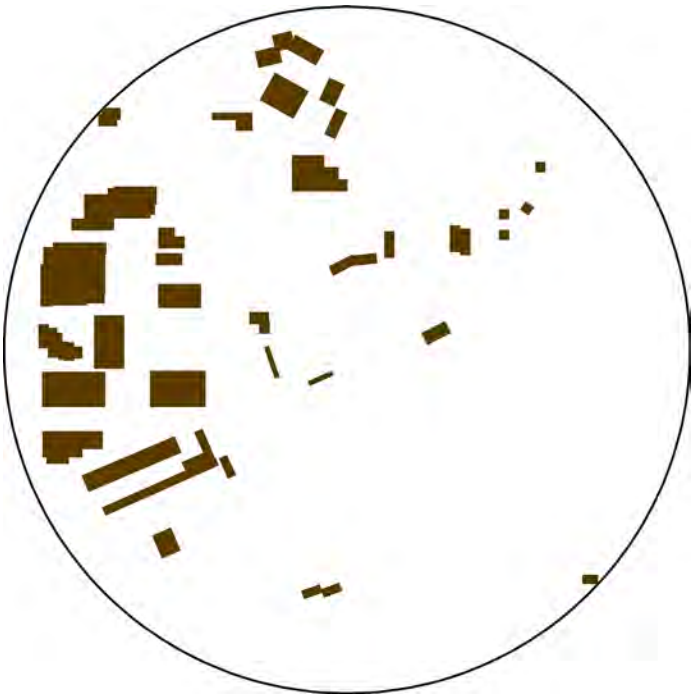
On the surface, the ratio for Excelsior Boulevard and Grand Way is close, if not the same for many of the other nodes examined. This is a skewed figure. The western and eastern halves of the site are stark contrasts. Overall, the space dedicated to vehicles is 50 percent of the half-mile study area. Most of the surface parking, however, is in the western half. Much is due to the Park Nicollet Clinic and the strip malls adjacent to Highway 100. In the eastern half, the single family neighborhood south of Excelsior and in the Excelsior and Grand mixed-used apartment and commercial area claims few parking spaces. People spaces contribute to 30 percent of the site. Surround these developments are wide sidewalks and public spaces. People spaces give way to parking in the in the western half of the study area. Finally, building areas account for 20 percent of the site.

The essential takeaway from this node is that depending on where one draws the boundary; the ratio can dramatically change. One side prioritizes vehicles producing a higher allocation of parking and roads while the other is more people oriented with wider sidewalks and public spaces.

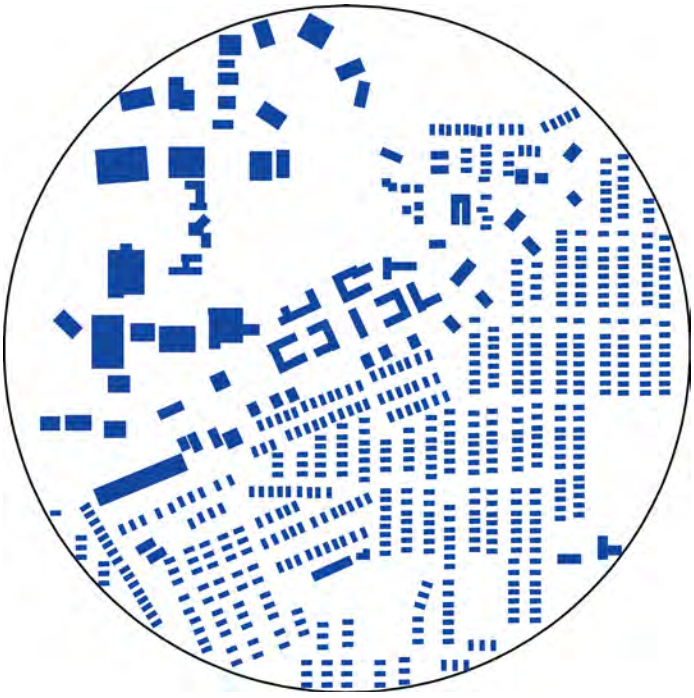
Roundabout at Excelsior and Grand Apartments at night. St. Louis Park, MN



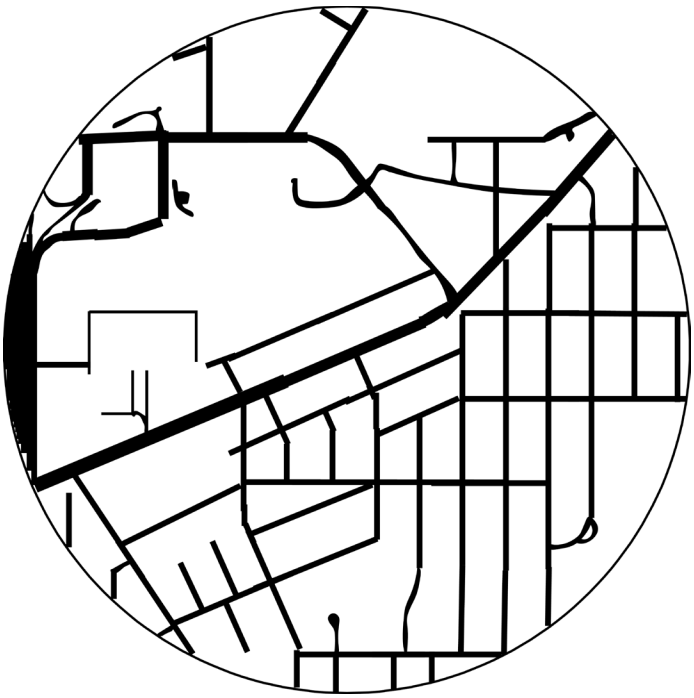
Public Space (People)



Parking Lots (Cars)



Buildings



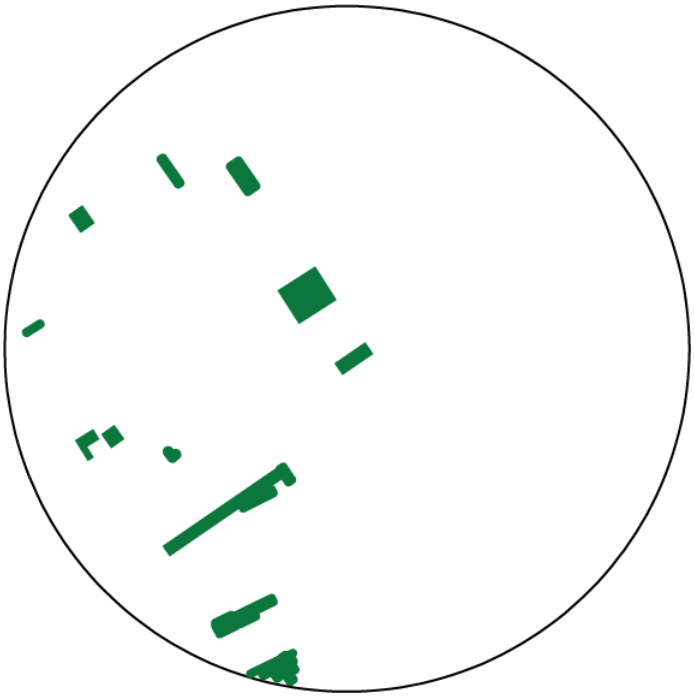
Streets (Cars)

# Union Depot

## Roads + Parking: 45%
## Buildings: 45%
## People (Public Spaces): 10%

Union Depot is the most urban of the study areas. In downtown Saint Paul, the building space is the largest land use at 45% of the total land area. This high percentage can be attributed to the high density of the node and the fact the station is located with the central business district (CBD) of Saint Paul. Roadway and parking lot space follows suit occupying 40% of land within the half-mile buffer zone. There are three large pockets of parking lots within the zone: to the south, east, and northeast of the buffer zone. These parking lots are adjacent to large office buildings and several are large park and ride lots that service commuters using Union Station. Many of the roadways are smaller and run in a grid pattern throughout the CBD. However, the Highway 94 interchange to the east of the node occupies a large percentage of land area. Although this node is the most urban area in our selection of sites, it has a fair amount of public (people) space: Mears Park, Kellogg Mall Park, Wacouta Commons, and Pedro Park provide small pockets of space dedicate solely for people.

Pedestrians walk along Cedar Avenue at 10th Street Green Line LRT Station in Downtown St. Paul



Public Space (People)

Parking Lots (Cars)

Buildings

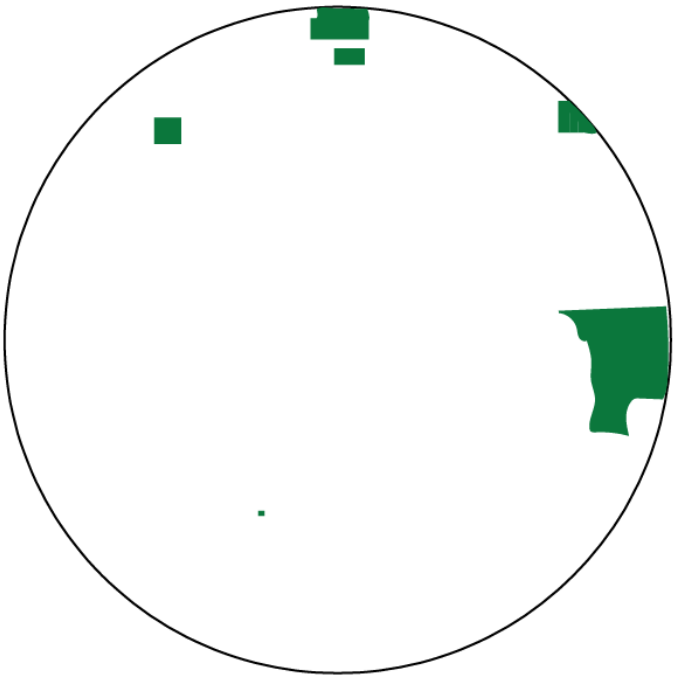
Streets (Cars)

# Rosedale Mall

## Roads + Parking: 70%
## Buildings: 25%
## People (Public Spaces): 5%

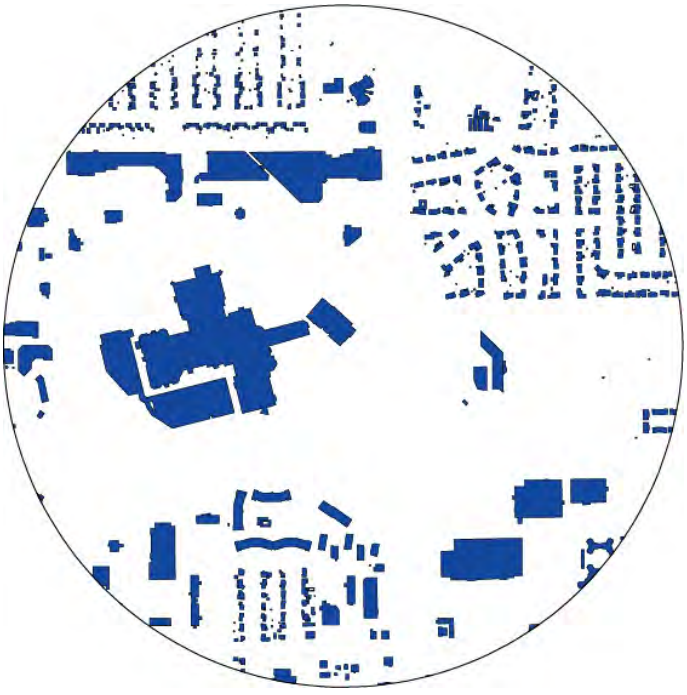
The land within the half-mile buffer of the Rosedale Transit Station is mostly set aside for vehicles. 71 percent of the land area is either street space or parking lot space. This high value can be attributed to Snelling Avenue, and the infrastructure that supports Highway 36 that runs through the study area. Buildings occupy 27 percent of land. Rosedale Mall, and other subsequent big-box stores are a large portion of this figure. People space is a mere two percent of the study area. With no park spaces within the bounds of the study site, the only people spaces are sidewalks. This ratio of nearly 7:3:0 is a stark contrast to the 4:4:2 ratio that the Cunningham Group found in their analysis of downtown Hopkins. Suffice it to say, the Rosedale Station area is extremely car-oriented and not friendly nor accessible to pedestrians.


A-Line BRT bus at Rosedale Transit Center

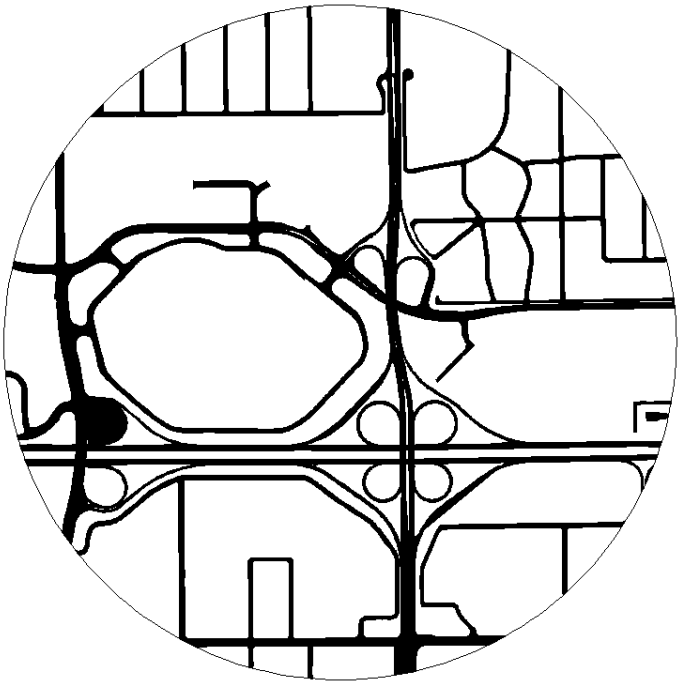


Public Space (People)

Parking Lots (Cars)



Buildings



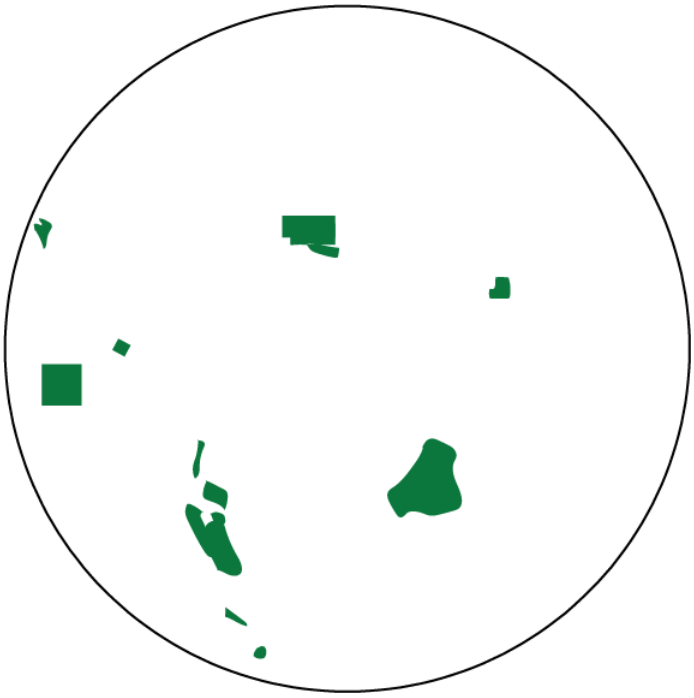
Streets (Cars)

# Prospect Park

## Roads + Parking: 45%
## Buildings: 45%
## People (Public Spaces): 10%

The land within the half-mile buffer of the Prospect Park station provides very little public space and is mostly comprised of larger roadways, parking lots, commercial buildings, and private homes. Several major roadways pass through or near this site (Universtiy Ave and Highway 280) and the node is encompassed by a very large BNSF freight rail yard to the north. The majority of the parking lots that exit in the buffer zone are located adjacent to the many commercial buildings and larger apartment complexes which spur off of University Ave. Building footprint size within the Prospect Park site is quite large as many office buildings are located in this area. The ratio of 4.5:1:4.5 follows along the lines of the average land allocation for the nodes selected for this study, and demonstrates the car-centric land allocation patterns observed throughout the region.

Aerial of Prospect Park



Public Space (People)

Parking Lots (Cars)

Buildings

Streets (Cars)

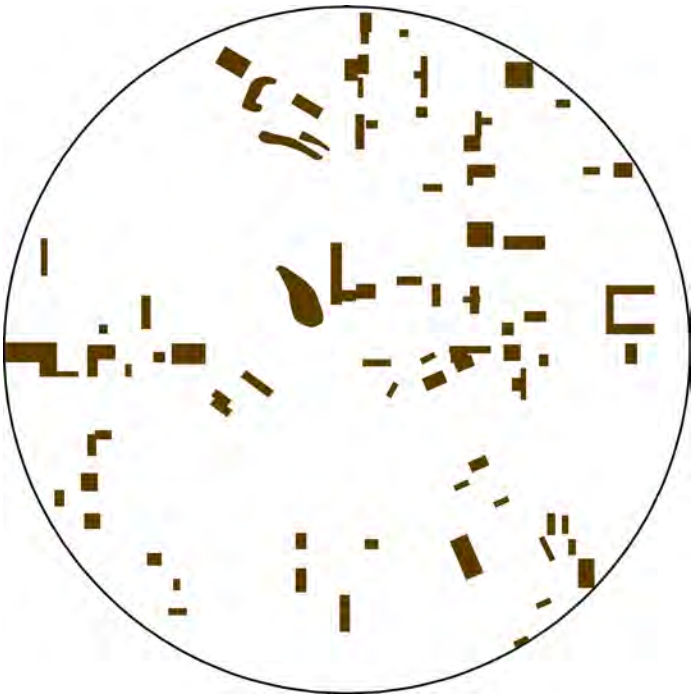
# Franklin Avenue

## Roads + Parking: 40%
## Buildings: 40%
## People (Public Spaces): 20%

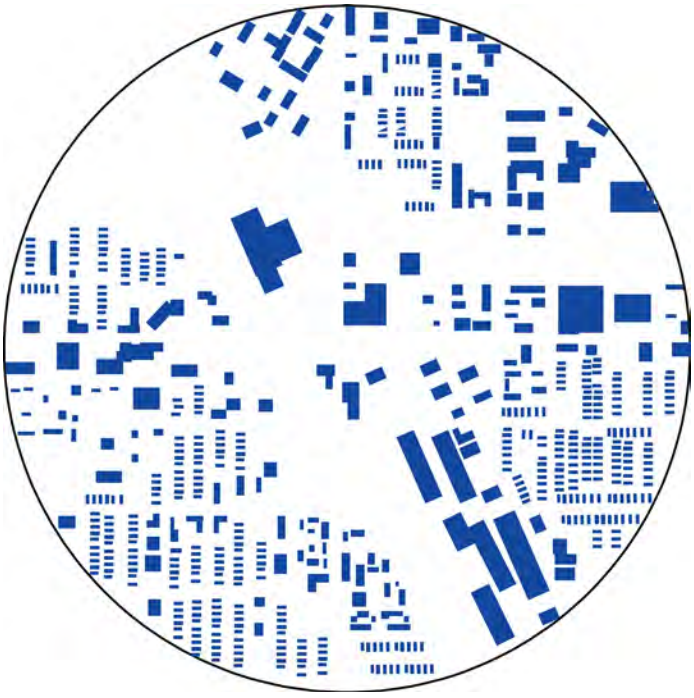
The land within the half-mile buffer of the Franklin Avenue station is broken into various zones by major roadways, inhibiting pedestrian access and safety and continues the trend of car-centric land allocation and infrastructure. This is clearly observed in the 4:4:2 land allocation ratio. Hiawatha Ave, Franklin Ave, and Highway 94 slice the node into distinct zones only accessible by personal vehicle. Even as a smaller arterial, Franklin Ave is hostile to both pedestrian and cyclists as cars drive at high speeds and crossings are infrequent. As can be found in the Prospect Park node, buildings with large footprints line both Franklin and Hiawatha Avenues. These primarily commercial and apartment complexes are also the location of many of the parking lots within the buffer. As this site contains several residential neighborhoods, as well as the southern edge of Augsburg College, this site has several parks: Cedar Field Park, East Phillips Park, Murphy Square Park, Minneapolis American Indian center plaza. This is a fair amount of public space compared with other sites in this selection. However, due to the disrupting nature of the road network in this node, the total benefits of these public spaces may be minimized.


Aerial image of Franklin Avenue Station and surrounding area

Public Space (People)



Parking Lots (Cars)



Buildings

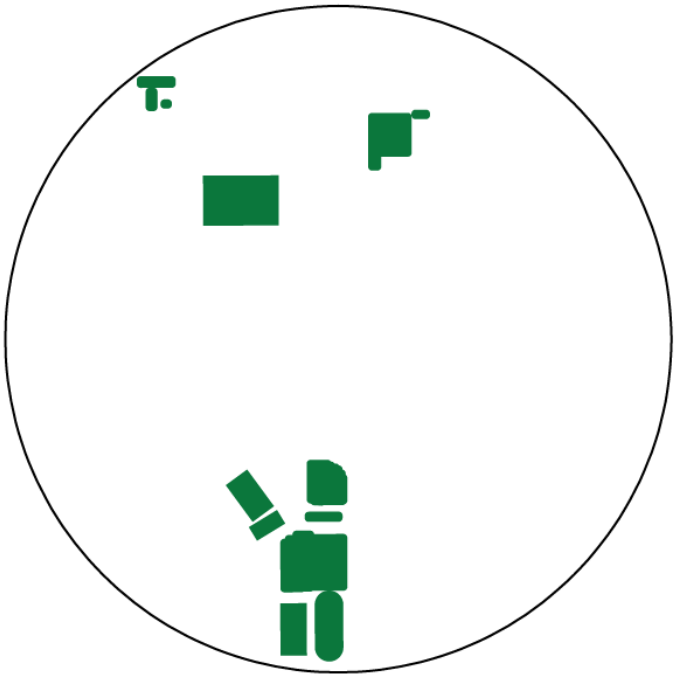
Streets (Cars)

# Blake Road Lift Station

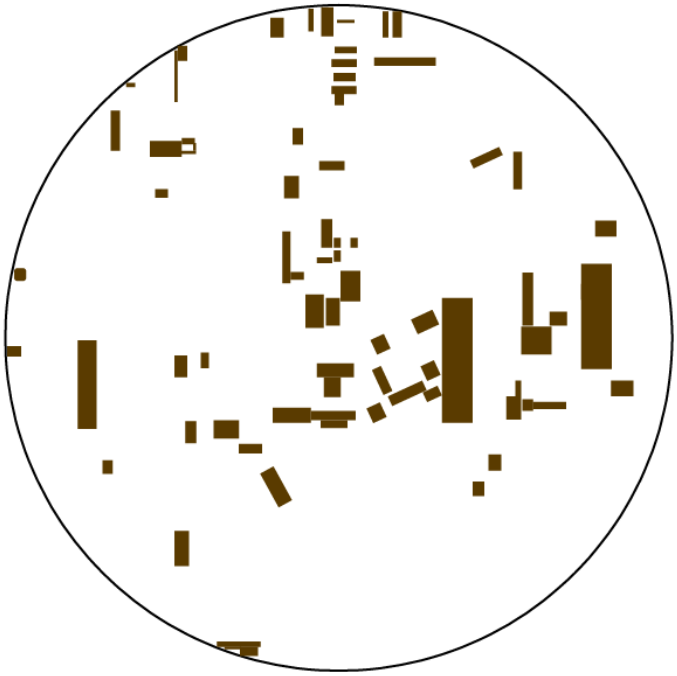
## Roads + Parking: 35%
## Buildings: 55%
## People (Public Spaces): 10%

The land within the half-mile buffer is dominated by building space. The reason for this lies in the fact there are many warehouses and commercial buildings within this site. These buildings are concentrated to the central portion of the buffer zone. This corresponds to the railroad which parallels the Cedar Lake Bike Trail. Buildings are also concentrated adjacent to the intersection of  Blake Rd and Excelsior Blvd, to the left side of the node. The very large gaps in the streets map is almost entirely filled with buildings and their corresponding parking lots, which also occupy a substantial portion of land area within this zone. On top of large warehouse and factory buildings, there are several areas of residential housing throughout the zone. Public space exists in this node in the form of large parks and several basketball and tennis courts. The large conglomeration of public space to the bottom of the buffer zone represents park and field space adjacent to the Blake School. With a high percentage of car space in the form of streets and parking lots (serving large warehouses and office space), and an overall ratio of 3.5:5.5:1this node continues the trend of car-centric sites throughout the Twin Cities.

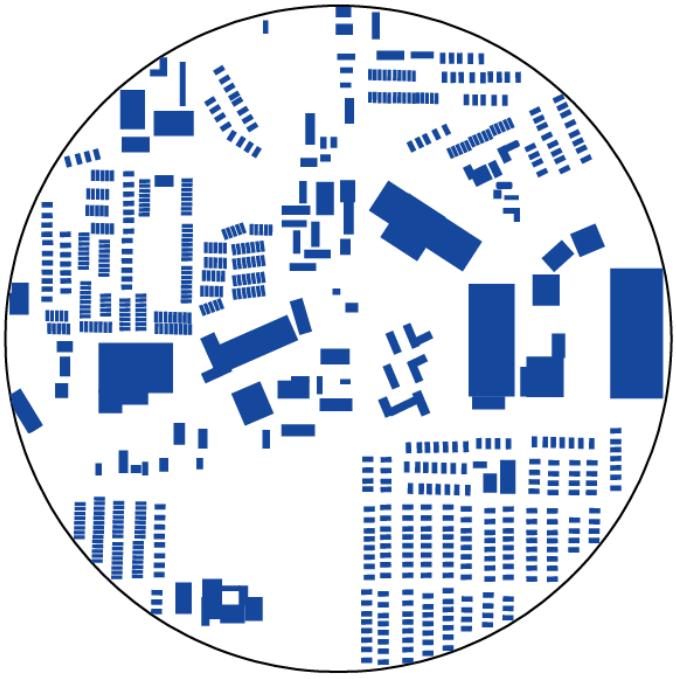
Aerial Image of Blake Road node



Public Space (People)



Parking Lots (Cars)



Buildings

Streets (Cars)

# From the Region to Rice and Larpenteur:

Studying the ratio between space dedicated for vehicles, buildings, and people has been useful in thinking about how nodes in the Twin Cities region are utilized. Predictably, space dedicated for vehicles outweighs space allocated for individuals in all nodes. However, the subtle aspects that comprised the metric of car space were different from site to site. In some nodes, car space was predominantly dedicated to parking, while others were made up of streets and freeways. Given the diversity of landscapes, it quickly became apparent that there was no 'golden ratio' to compare one site to another when discussing the potential for TOD. Moreover, the ratio did not articulate many of the components that factor into the TOD such as local acceptance, location, job accessibility, regional markets, etc.

Nevertheless, the metric still has value. We believe that it can be utilized as an illustrative tool to spark community conversations about land allocation. This sort of tool could be useful for governments advocating for increasing pedestrian infrastructure, neighborhood groups hoping to increase development in their community, or concerned individuals seeking to open a dialogue about the public right of way. While untested in a public forum, this illustration could potentially help start new conversations.

Regarding the Rice and Larpenteur intersection, the illustrative tool sets the stage for how to prioritize redeveloping the site for TOD. The ratio showed us that roadways, parking lots, and other spaces for vehicles dominated the sites and areas in general. Therefore, to bring about a more human-centered, rejuvenated, and sustainable site, it is necessary to develop a strategic set of goals and policies, as well as a timeline along which we believe certain actions should take place.

The remainder of this report will lay out these policies and guidelines one by one in a specific and straightforward fashion, all within the context of the intersection of Rice and Larpenteur. The findings from the land allocation metric do not directly influence the policies proposed in the Action Plan (Section VI). Any reference to or about the land allocation metric will be purely in the context of an educational tool that municipalities and government entities can use as a potential conversation starter regarding TOD.

Half-mile buffer around the  Rice & Larpenter intersection.

# Action Plan

# Rice & Larpenteur

On the surface, the intersection of Rice Street and Larpenteur Avenue, in the east Twin Cities metro area, does little to conjure up ideas of transit-oriented development (TOD). Large surface parking lots, missing and crumbling sidewalks, and fading crosswalk paint characterize the crossroads. While Metro Transit routes 62, 68, and 262 serve the intersection, the site is car dependent. Without a car, travelling to downtown Saint Paul, let alone Minneapolis, involves catching one of these buses and likely a transfer or two.

The intersection's Walk Score is 45 (meaning most errands require a car) and a transit score of 39 (meaning there are few public transportation options)[1]. In comparison, Downtown Saint Paul has a Walk Score of 92 and a Transit Score of 77.[2] The factors that contribute to these scores are distance to amenities, population density, block length, and intersection density.[3] Walk Score indicates that the largest disparity in the score is in terms accessing and running errands and culture and entertainment. While what is defined as errands and entertainment can vary from one person to the next, the result at a high level illustrates the remoteness of the site to more walkable and accessible areas.

Despite these challenges, the intersection has potential. The Rice and Larpenteur intersection is where the jurisdictions of the Saint Paul, Maplewood, and Roseville meet. Ramsey County also owns and maintains both of the roadways: Rice Street and Larpenteur Avenue. The layers of governmental entities present an opportunity for resource pooling and intergovernmental collaboration.

These demographics of these neighborhoods are unique. Twenty percent of households in Saint Paul's North End neighborhood do not own a personal vehicle-- relying on public transit and alternative forms of transportation to get around.[4] As a comparison, in Saint Paul, fourteen percent of households do not own a personal vehicle


Photos of existing transit and pedestrian facilities at the Rice & Larpenter intersection.

1 Walk Score. "County Rd 49 and Larpenteur Ave" https://www.walkscore.com/score/county-rd-49-and-larpenteur-ave-w-maplewood-mn-55113 (Accessed April 11, 2017).
2 Walk Score. "Downtown Saint Paul". https://www.walkscore.com/MN/_Paul/Downtown (Accessed April, 14, 2017).
3 Ibid.
4 Van Berkel, Jessie. "Residents Hope New Investments Will Revitalize Paul's Rice Street." January 17, 2017. http://www.startribune.com/residents-hope-new-investments-will-revitalize-st-paul-s-rice-street/410884305/ (Accessed March 26, 2017).

according to American Community Survey's 2010-2013 estimates[5].

The North End neighborhood also has the highest poverty rate of any Saint Paul Neighborhood with a median household income of $32,156, compared to that of $50,885 citywide.[6] Moreover, the level of unemployment for the North End census tracts that border Larpenteur are 12.7 and 15.5 percent respectively. Comparatively, Saint Paul's citywide unemployment rate is 3.7 percent. The area is also home to recent Hmong, Karen, and Karenni immigrants as well as working class families. According to the American Community Survey's 2015 5-year estimates, the Census tracts in the North End Neighborhood that border Larpenteur boast a 45 percent Asian population.

Given the mixture of jurisdictions and demographics, our capstone team sees the area around Rice and Larpenteur as an opportunity to push planning, engagement, and development boundaries in the Twin Cities. As an Innovation District, the intersection could act as a catalyst for new employment, housing, and transportation options for the neighborhoods as well as an idea incubator for the region.

The question is, how does one move from today's Rice and Larpenteur to tomorrow's? The action plan and recommendations described below will help to make this happen. While we do not profess to have a 'silver bullet' of solutions, the recommendations proposed will contribute to establishing the conditions necessary for tangible and positive change at the intersection.

It is imperative that the jurisdictions adjacent to the intersection implement thoughtful and comprehensive public engagement processes. More often than not, recent immigrants with low incomes have few opportunities to advocate for themselves. Each recommendation suggested below should involve a civic engagement process.

5 "Car Ownership in U.S. Cities Map." Governing: the States and Localities. 2013. http://www.governing.com/gov-data/car-ownership-numbers-of-vehicles-by-city-map.html (Accessed March 28, 2017).
6 Van Berkel,"Residents Hope."

# Summary of Recommendations

**The following recommendations utilize the advantages and resources that exist in the neighborhoods that meet at Rice and Larpenteur. TOD will serve as a catalyst that will captures these resources and harness their energy to transform the intersection into a visible and innovative space. We have organized our action plan recommendations into three categories: community now/community later, transportation, and economic development. All recommendations are interconnected: the implementation of one will lead to the success of others.**

| Recommendation | Section | Keywords |
|---|---|---|
| A Wider Variety of Housing Types | Community Now - Community Later | Anti-displacement, seniors, affordable |
| Increased Park and Green Space Access | Community Now - Community Later | Recreational, destination, entertainment |
| Install Traffic Calming Measures | Transportation | Walkability, safety, noise reduction |
| Implement Bus Rapid Transit (BRT) along Rice Street | Transportation | Reliable alternative to driving |
| Multimodal Infrastructure | Transportation | Commuting, recreational, connectivity |
| Create Opportunities for Small Business | Economic Development | Re-utilizing land, connection building, lowed-barrier to entry |
| Invest in Skills Training Opportunities | Economic Development | Makerspace, Health Sciences, From learning to employment |
| Develop a Commercial Kitchen Space | Economic Development | Low-barrier to entry, micro-lending |

# Community Now - Community Later

A central part of transforming the communities that meet at Rice and Larpenteur is designing for both the current and future residents. A significant challenge that emerges from redevelopment in historically disinvested in areas is displacement or gentrification. The goal of "Community Now / Community Later" is to intentionally redevelop so to include the existing communities. They have a role in the future of Rice and Larpenteur and it is the responsibility of the local governments and Metro Transit to help residents fully participate in the growth and success of their community.


Green Line LRT on East Bank Campus

# Recommendation: A Wider Variety of Housing Types

Currently, the area around the Rice & Larpenteur intersection supports a narrow range of housing types. This lack of variety limits development of affordable, senior, and multi-generational housing.

- Minnesota has a growing aging population that will need housing. Many retiring Baby Boomers are looking to downsize from large suburban homes and move closer to city amenities and family.
- The Twin Cities faces a continuing shortage of affordable housing units, which the Met Council projects will only increase in the upcoming decades. Displacement is an unfortunately common occurence when new development and investment occurs in neighborhoods. To ease the potential effects of displacement, guaranteeing affordable housing will allow current residents who live near the Rice & Larpenteur intersection to remain in their community.
- Our region's aging population, as well as our increasing immigration population, will increase demand for multi-generational housing stock.

The greatest challenge for affordable housing developers is gap financing. Cities can lower the development costs through eliminating and/or reducing fees, as well as providing grants through affordable housing trust funds. Additionally, rezoning areas for mixed-used residential and commercial zoning uses will remove barriers to housing development by speeding up the review and permitting process.

Essential to mitigating displacement is ensuring that there are affordable housing options for low-income people living at Rice and Larpenteur. To achieve this outcome, the following actions should be taken:

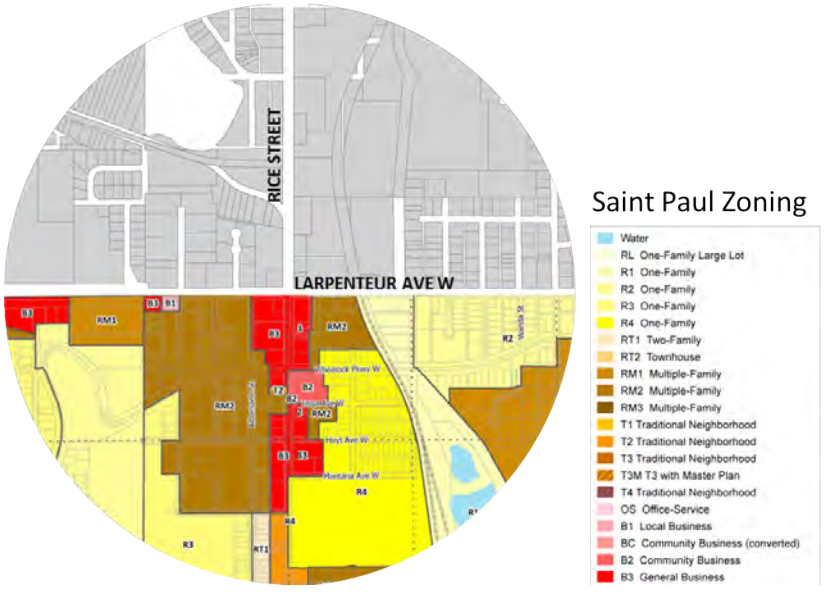
- Saint Paul, Roseville, and Maplewood should provide developers with government financial assistance in the form of fee waivers/ reduction and government grants.
- The cities should create partnerships with socially-oriented lending groups such Housing Partnership Equity Trust (HPET) to

help affordable housing developers access long-term and low-cost capital resources to support acquisition, renovation, and maintenance costs. Partnering with socially-oriented lending services such as HPET or the national Housing Partnership Network is essential for financing affordable housing development. There is precedent for such partnerships. In June 2016, Aeon partnered with HPET to acquire two existing apartment buildings near the intersection of Rice and Larpenteur.

- The three municipalities must make significant zoning changes to allow increased residential density and a greater mix of housing product.

**Saint Paul - Rezone from B3 to T3.**

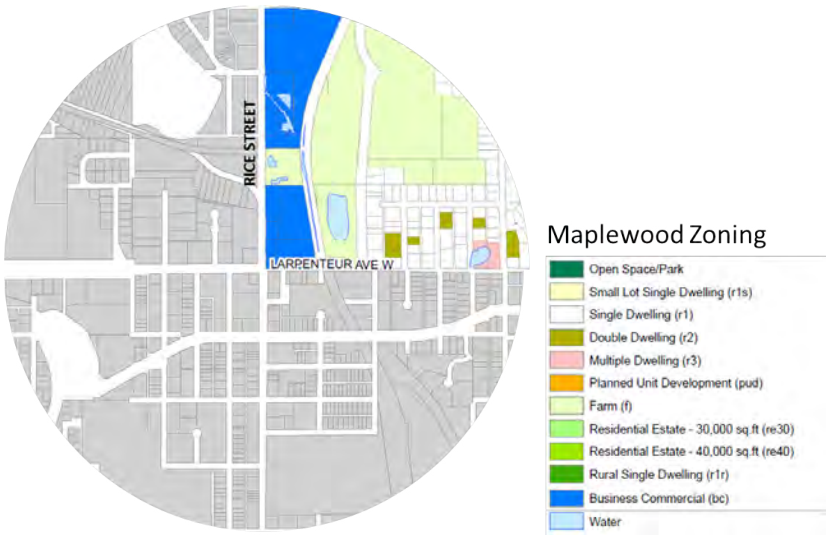
B3 is a general business district that permits home occupation, mixed residential/commercial, foster homes, and supportive housing. Changing to T3 would allow for higher-density pedestrian and transit oriented development. Specifically, this allows a mix of uses that include residential, commercial, civic, and open spaces that are tightly mixed together. This zoning distinction allows for a diversity of housing styles including affordable and senior housing. Furthermore, the intent of the T3 zoning is to support potential "urban villages" that bolster walkability and accessibility to multiple assets.[1] Rice & Larpenteur has the potential to grow into a vibrant and successful urban village, but only if the zoning and land use in the neighborhood allow for increased density.




1 Saint Paul City Zoning Code. https://www.stpaul.gov/departments/safety-inspections/city-information-complaints/resident-handbook/zoning/city-zoning-code (Accessed March 2017)

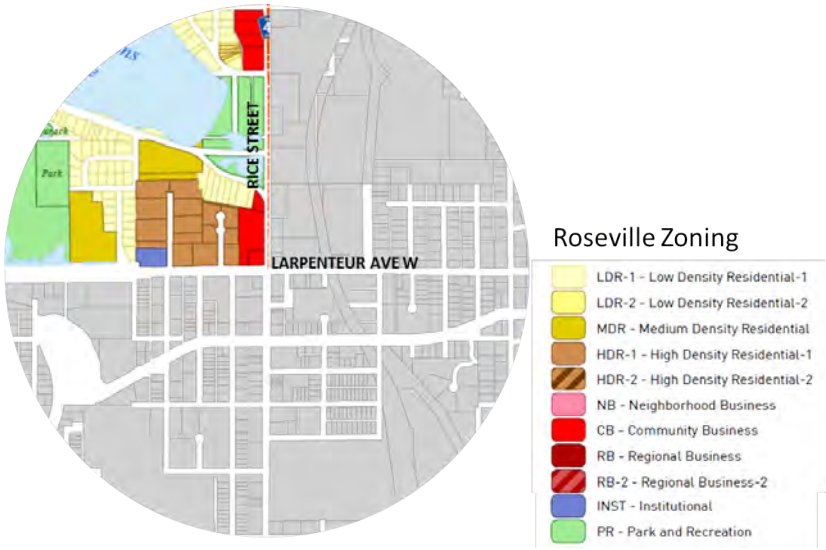
**Maplewood - Rezone from BC to a new, higher density mixed-use zoning district.**

Maplewood's Business Commercial zoning currently only permits one residential dwelling unit if connected to a business (both uses must be located in the same building). The City does not allow multi-family housing without an application and a case-by-case review period. Creating a more flexible zoning district will help to attract more diverse uses and developers.[2]




**Roseville - Rezone from CB to a new, higher density mixed-use zoning district.**

Roseville's Commercial Business zoning currently only permits multi-family housing on the second story of mixed-used building, student housing, nursing homes, and assisted living facilities after completing a conditional use permitting process.[3] As in Maplewood, a new mixed-use zoning district with a greater variety of housing types will ensure that current residents can stay in their neighborhood and new development can occur.




2 City of Maplewood Zoning Ordinance. http://maplewoodmn.gov/365/Zoning-Information (Accessed March 2017).

3 City of Roseville Zoning Code. http://www.cityofroseville.com/622/Zoning-Code (Accessed March 2017).

**Specific Metro Transit Recommendation:**
Make preparations for increased facility demand from new affordable and multi-family housing.

**Anticipated Challenges:**
- Gap financing: Often affordable housing developers will struggle to cover the entire costs of a project. Gap financing can come in the form of loans, philanthropy, and municipality affordable housing trust funds.
- Political and neighborhood opposition: The intersection is located in a relatively suburban area for all three jurisdictions. Rezoning the area for multifamily housing may meet resistance from local constituents who want to maintain their single family neighborhood.
- Resistance to land use changes: While there is a significant percentage of people in the neighborhood who do not drive, the intersection of Rice and Larpenteur is a car-centric place. Large surface parking lots and poor sidewalk continuity epitomize the intersection. Suggesting to redevelop these parking lots will likely produce resistance from existing store owners who may feel that they need all of the parking spaces in front of their store.

**If Nothing Happens:**
The Twin Cities region will lose an opportunity to cut into their affordable housing deficit. Specifically, the low-income neighborhoods that meet at the intersection of Rice and Larpenteur will continue to be underserved by housing options. The existing narrow range of housing stock will not attract enough new residents to support increased neighborhood vibrancy. Lack of developer interest in the area will also continue to be a problem, making the necessary increase in affordable housing and safe pedestrian infrastructure much more challenging.

**Management:**
The Cities of Saint Paul, Maplewood, and Roseville play a significant role in making these changes. The three municipalities have begun a joint vision process for the neighborhood. Rezoning, waving permits, and investing affordable housing trust funds resources are all within the wheelhouse of the cities. Creating a strong partnership with lenders such as HPET is less so. While cities are key partners, a coalition of local affordable housing developers, and community development corporations such as the Saint Paul Coalition for Community Development will be necessary for securing additional resources to fund projects.

**Funding:**

City Affordable Housing Incentives

- The City of Saint Paul provides Rental Housing Tax Credits for "eligible rent housing developments located within the boundaries of the City of Saint Paul. The program offers a reduction in the tax liability to owners and investors in eligible low-income new construction, rehabilitation and/or acquisition of existing rental buildings. The HRA is anticipating an allocation of $755,842 of Low-Income Housing Tax Credits in 2017."[4]

Greater Minnesota Housing Fund

- GMHF provides financing support for affordable housing projects in the State.
- Since 1996, GMHF has awarded more than $253 million in financial support for affordable housing developments.[5]

Conventional Lenders

- Bank of America with RAD - "Bank of America lent a total of $2.6 billion to affordable housing properties in 2015, up from the $1.8 billion the bank lent in 2014. That makes it the third-largest United States affordable housing lender."[6]
- Citi Community Capital

Affordable housing developer resources

- LISC - Twin Cities can provide technical support and financial resources to support affordable housing projects.

Philanthropy

- Many affordable housing developers seek philanthropic support to be able to close the financing gap.

**Timeline:**

Short (Years 1 to 5):

- The land surrounding the Rice and Larpenteur intersection are rezoned. The cities and Ramsey county undertake streetscape improvements to accommodate increased pedestrian uses.

Medium (Years 5 to 10):

- Affordable housing developers, CDCs, and socially-oriented financiers collaborate to acquire properties and plan new construction. Existing underutilized buildings are renovated into affordable and multi-family housing units.

Long (Years 10 to 20):

- New construction of a wider variety of housing types.

4 City of Saint Paul. "Rental Housing Tax Credits." https://www.stpaul.gov/departments/planning-economic-development/housing/housing-property/rental-housing-tax-credits (Accessed April 16, 2017).

5 Greater Minnesota Housing Fund. "Finance." http://gmhf.com/finance/ (Accessed April 16, 2017).

6 Affordable Housing Finance. "AHF Announces Top 25 Affordable Housing Lenders." http://www.housingfinance.com/finance/ahf-announces-top-25-affordable-housing-lenders_o (Accessed April 16, 2017).

# Recommendation: Improving Park and Green Space Connectivity

Increased park and green space connectivity will attract new residents as well as improve the quality of life of those already living near the intersection of Rice and Larpenteur. Within a mile of the intersection, there are already several parks, off-road bike paths, as well as Rice and Arlington Field, that includes several baseball diamonds.

These resources, while plentiful, could be could better connected to amenities in the immediate neighborhood as well as throughout the region. The City of Saint Paul has plans to reconstruct Wheelock Parkway between Rice and Edgerton Street from April to November of 2017.[1] This project will connect Wheelock Parkway to the Saint Paul Grand Round trail network. With this project as the catalyst, it makes sense to link the nearby parks to the parkway to create a comprehensive green space network.

Each city should identify underutilized green space to support better linkages to existing park spaces.

- The three cities should identify opportunities to connect new and existing parks via multi-modal infrastructure.
- The three cities should implement complete street policies and other strategies to reclaim spaces for vegetation and greenery.
- Increasing linkages could also mean creating new park spaces. The Parks departments of the three cities should form partnerships with local banks, health care providers, Minnesota United FC, Minnesota Wild, and other interested parties to construct a community space that maintains an outdoor futsal and hockey rinks for public use.
    - Attracts visitors
    - Amenity for the community - a safe place for kids to play
    - Celebration of Minnesota culture
    - Potential for revenue generation through visitors

**Metro Transit Recommendation:**
Coordinate with cities to build transit facilities that serve the expanded park network.

1 City of Saint Paul. "Wheelock Parkway Recontruction 2016." https://www.stpaul.gov/departments/public-works/road-construction/wheelock-parkway-reconstruction (Accessed April 14, 2017).

**Anticipated Challenges:**

- Operational/maintenance funding: The addition of new green space connections and street trees to be maintained by city resources can be a burden for underfunded public works departments.
- Acquiring land for public use - reduction in tax revenue: The three cities involved in the Rice and Larpenteur redevelopment will have to balance their need for tax revenue when turning developable land into park space.
- Local Opposition: Community members may resist the expansion of green space especially if it requires acquiring private land to build off-street trails.

**What happens if we do nothing:**

The area will continue to have isolated park space, making the neighborhood unattractive for new residents. Lack of safe and easily accessible recreation space will also have negative consequences for public health. Park space can be a space for community members to socialize and form connections; the lack of such space limits opportunities for relationship building and improving social cohesion. The neighborhood will also miss out on the opportunity to connect to regional park systems through the Wheelock Parkway, denying both local residents and visitors the opportunity to explore the neighborhood and its rich amenities.

**Who Manages:**

The cities of Saint Paul, Roseville, and Maplewood will own and maintain any new park space in the neighborhood.

**Funding:**

Cities' capital funds/Maintenance Funds

- Establish a tax increment financing district (TIF)
- Divert future property tax revenue increases in a specific district to fund the park projects.

Federal Recreational Trail Program[2]

- Examples of eligible projects:
  - Motorized and non-motorized trail projects
  - Maintenance/restoration of existing recreational trails
  - Development/ rehabilitation of recreational trail linkages
- The program requires a 25% cash or in-kind match per project.
- There are restrictions on the source of match funds.
- A grant request ranges between $1,000 and $150,000

2 Minnesota Department of Natural Resources. "Federal Recreational Trail Program." http://www.dnr.state.mn.us/grants/recreation/trails_federal.html (Accessed March 28, 2017).

**Timeline:**

Short: (Years 1-2):

- Identify locations for new parkland; plan for pedestrian and bicycle infrastructure to link parks to regional networks; plan for complete streets
- Create partnerships with Minnesota United and other groups to begin planning the Futsal and Hockey rink.

Medium: (Year 3-5):

- Construct pedestrian and bicycle connections to support the Wheelock Parkway improvements.
- Begin construction of hockey and futsal court

Long: (Years 5-10):

- Develop new park space
- Establish permanent and long-term funding sources for operations and maintenance of expanded green space.
- Hockey and futsal court completed

Examples of outdoor Futsal courts in France (top) and Seattle (bottom).

Grand Round Scenic Bikeway near Lake Calhoun, Minneapolis

Heritage Bikeway, Kokomo IN

# Transportation

A pillar in successful TOD lies within the transportation network of a site. Roadways that are safe and accessible for all modes of transportation, streets that connect all types of amenities and are accessible by foot, and reliable and high-frequency transit options are just some of the aspects of a transportation network that help to support successful TOD in the United States.

# Recommendation: Install Traffic Calming Measures

The three municipalities that share a border with Rice and Larpenteur should: 1. install traffic calming and road safety measures; 2. develop traffic calming policies.

- A 4-lane-to-3- lane road diet should be enacted along the length of Rice Street.
  - 1 travel lane in each direction accompanied by a center turn lane.
  - This configuration currently exists along several sections of the roadway, but needs to become standard for the corridor as a whole.
- Speed bumps should be installed at strategic locations. This includes before and after crosswalks, stoplights, and bike trails in order to reduce roadway speeds.
  - For example, in order to protect cyclists, speed bumps should be placed along Rice Street before and after the intersection with the Wheelock Parkway. This intersection lies south of Rice and Larpenteur. After proposed roadway improvements are carried out, this intersection will serve as a primary access point to Rice and Larpenteur for cyclists and pedestrians. Crash data from 2016 shows that there were two incidents at this crossing, both times involving pedestrians[1]. Traffic calming measures at this crossing would increase the safety of those using the Wheelock Parkway.
  - In compliance with the vision for the development at Rice and Larpenteur, physical traffic calming measures such as these could be placed several blocks before and after the intersection.
- Reduce speed limit from 35 MPH to 25-30 MPH. This will make Rice safer for pedestrians and bicyclists.
- Increased signage alerting drivers to presence of pedestrians, cyclists, and their current vehicular speed.
- Enforce harsher penalties for drivers that are caught speeding along the roadway. Implement traffic speeding cameras.

Example of a speed bump near a pedestrian crossing.

**Explanation:**
Currently, the conditions along Rice Street are dangerous for all modes of travel. Traffic is fast-flowing and the lack of adequate

1 City of Saint Paul. "Pedestrian and Bicycle Crash Data" https://information.stpaul.gov/Public-Safety/Pedestrian-And-Bike-Crash-Data-Map/9qtp-ayhq#Visualize (Accessed April 15, 2017).

signage, crosswalks, and pedestrian and bicycle infrastructure contributes to an auto-centric streetscape. Residents in the area feel uncomfortable crossing and walking along Rice Street. In 2014, an 11 year-old boy was struck and nearly killed while trying to cross Rice Street, just south of Larpenteur, on his way to school.[2] The four-lane road encourages drivers to frequently change lanes leading to inherently higher speeds and increased chance for crashes.[3] Some limited traffic calming measures are already in place on Rice Street. The crosswalk, and accompanying concrete island barrier, are in place across Rice Street as residents cross the road and continue their way along the Trout Creek Trail. More crossings such as this, and other safety measures, are necessary to protect the residents of these municipalities and to increase the standard of living for all.

**Metro Transit Recommendations:**

- Help provide educational materials to municipalities to promote roadway safety and context sensitive solutions
- Provide access to roadway safety grants

**Anticipated Challenges:**

- Local Opposition: Drivers will likely complain and resist major infrastructure changes that reallocate vehicle right-of-way space to pedestrians.
- Funding: Limited county and municipal funding may curtail which projects can be implemented to calm traffic at the intersection and on the streets in general.
- Legal challenges to traffic cameras: The implementation of traffic speeding cameras has been challenged in court in other states. Right now there is no law or court ruling prohibiting speed cameras in Minnesota. That does not mean there will not be at some point.

**What happens if we do nothing:**

Rice Street will remain a dangerous thoroughfare and more lives will be put in danger. The corridor will be viewed as an area that a commuter can pass through quickly while avoiding traffic on I-35, instead of a destination location where residents can get from place to place safely and efficiently. The commercial district that exists along Rice between Iowa Avenue and Water Works Road will continue to decline, losing business to other areas that attract individuals who

2 Long road to recovery for Paul boy struck by car last fall. Grand Forks Herald. http://www.grandforksherald.com/news/region/3674328-long-road-recovery-st-paul-boy-struck-car-past-fall (Accessed March 28, 2017).

3 Federal Highway Administration. "Evaluation of Lane Reduction 'Road Diet' Measures on Crashes." https://www.fhwa.dot.gov/publications/research/safety/10053/index.cfm (Accessed March 28, 2017).

## Short Timeline: (Years 1-5)

## Medium Timeline: (Years 5-10)

## Long Timeline: (Years 10-20)

Examples of road diet configurations on Rice Street.

use all modes of transportation. People will continue to invest in and live in other neighborhoods where they and their children are able to avoid dangerous roadways. Developers, will continue to avoid investing in and taking on projects around the intersection. This will ultimately make any sort of transit or pedestrian-friendly development impossible.

**Who Manages:**
The cities of Saint Paul, Maplewood, and Roseville will play a significant role in managing the roadway and ensuring that those who use it are safe and protected. It is crucial that these municipalities work together to enact traffic calming and road safety measures. It is also up to local residents and community organizations to continue to demand safer roadways for all users, and for city staff to address their concerns.

**Funding:**
The cost of implementing these traffic calming and safety strategies can be high. However, the crash reduction factors will be significant. Costs for a 4-to-3 road diet reconstruction can vary widely based on many factors, including existing infrastructure, extent of overhaul, and ease of implementation. However, based on recent estimates from the Roadway Safety Plan for the City of  Paul, construction costs can come to be approximately $160,000 per mile and can reduce crashes by 30 to 50 percent, whereas pedestrian and bike countdown timers cost approximately $12,000 per intersection and can reduce crashes by 30 to 45 percent.[4]

**Timeline:**
Short (Years 1 to 5):
- Pedestrian crosswalks, island protectors, and new countdown timers are installed. New signs are installed at pedestrian crosswalks to alert drivers to reduce their speed and increase awareness of pedestrians and cyclists. Speed limits are reduced on Rice Street between Arlington Avenue West and Roselawn Avenue We Traffic speeding cameras are introduced.

Medium (Years 5 to 10):
- The number of lanes along the length of Rice Street is reduced from 4 to 3.  The roadway is changed by adding speed bumps and chicanes at strategic locations (those in need of additional protection: along parks, schools, businesses, and intersections). Street beautification efforts are underway, including the planting of trees and the repaving of sidewalks and roads. These types of efforts have been proven to change driver behavior and reducing overall driving speeds.

Long (Years 10 to 20):
- Roadway remains at 3 lanes and a roundabout has been installed at the intersection of Rice and Larpenteur. Traffic incidents between vehicles has drastically decreased. Incidents between vehicles and bicyclists and pedestrians have also drastically decreased.



4 City of Saint Paul. "Roadway Safety Plan." 2016.

# Recommendation: Implement Bus Rapid Transit Along Rice Street

A new BRT line should be constructed along Rice Avenue. The route should begin at a terminal further to the north, providing access to valuable amenities such as grocery stores, office space, schools, and residential buildings. The route should then run south along Rice Avenue, passing through major commercial, residential, and employment sites along the corridor, ultimately terminating at Union Depot in Downtown  Paul. Consider placing stops at:

- Near the Rosedale Estates Apartments at County Road C2 West
- Near Walgreens at County Road C West
- ALDI at County Road B2 West
- Cub Foods at County Road B East
- Intersection at Rice and Larpenteur
- Maryland Avenue West
- Front Avenue
- Atwater Avenue
- University Avenue (connections with Green Line and State Capitol)
- Regions Hospital
- 7th Street- Downtown  Paul

**Explanation:**
Transit service in and around the intersection at Rice and Larpenteur is infrequent, limiting the mobility of residents who rely exclusively on transit. Metro Transit plans to upgrade current routes to high frequency in the near future. For the time being, current infrequent service and lack of  mobility puts a strain on access to jobs and commercial or recreational centers. Fixed transit like light rail is not a viable transportation alternative in this area. Bus Rapid Transit (BRT) service exists and functions successfully in the region. The A Line BRT route runs along Snelling Avenue from the Rosedale Transit Center south to the 46th Street Blue Line light rail station. This route provides residents of Western Roseville, Falcon Heights, and  Paul rapid transit access.

However, for residents who live near Rice and Larpenteur, reaching the A Line without a car is not an easy journey: 3 miles or 1 hour by foot; at least 30 minutes and 2 buses; or a 30 minute bike ride. Put another way, in the time it takes a person taking transit to reach the 3M Corporate headquarters (a journey of an hour and twenty

minutes), a major regional employer located in Maplewood, a person driving a car could complete the nearly 10-mile, one-way journey over five times.

As the population continues to age, many seniors will not be able to continue driving, and will seek alternative methods of transportation. Young adults hoping to move to urban areas and live car-free lifestyles also want to see more frequent transit options that connect them to places where they can live, work, and play.[1] In order to rejuvenate the neighborhood, frequent, reliable, and rapid access to and from the Rice and Larpenteur intersection is crucial. This will allow residents to effectively access jobs and commercial centers, as well as help people from all over the region enjoy the many attractions and amenities that the neighborhood has to offer. A BRT line along Rice Street could be the catalyst that the neighborhood needs to grow and thrive.

Snelling A-Line BRT Line, Paul

**Metro Transit Recommendation:**
Explore a BRT line along Rice Street; prioritize dedicated lanes for BRT buses, unlike the current A-Line which drives in mixed traffic

**Anticipated Challenges:**
- Public Resistance: Reallocating road space for BRT stations and operations could generate local resistance. Particularly if there are concerns with congestion, people waiting for the BRT, and eminent domain disputes.
- Lack of funds (local, regional, state, federal): With proposed cuts to Metro Transit funds coming from the State, it could be challenging to expand and add new services.

**What if we do nothing:**
The neighborhood will continue to be dominated by cars, and transit connections will be lackluster, making accessing jobs and other amenities time consuming for transit-dependent residents. This inaccessibility could drive developers -- interested in areas that are vibrant and multimodal -- away, further exacerbating the situation of disinvestment. If redevelopment occurs, in order to help rejuvenate the neighborhood, those seeking to access amenities and residences will have to rely primarily on personal vehicles for transportation. This will continue the trend of inaccessibility to and from the neighborhood by transit, as well as contribute to increasing congestion and pollution.

**Who Manages:**
Although this proposed BRT line would exist primarily in Paul, due

1 "Why Millennials Are Ditching Cars And Redefining Ownership." National Public Radio. 2013. http://www.npr.org/2013/08/21/209579037/why-millennials-are-ditching-cars-and-redefining-ownership (Accessed March 28, 2017).

to the location of the intersection, the three bordering municipalities (Roseville, Maplewood, and Paul) need to coordinate in order for the project to be successful. Metro Transit and the Metropolitan Council would be in charge of the majority of the operation (planning, outreach, construction of stops and stations, and operations, etc).

**Funding:**

New Starts Program[2]

- The Federal program allocates roughly $2.3 billion annually to projects such as light rail, commuter rail, and bus rapid transit.
- The total project cost must be equal to or greater than $300 million/ funding sought is equal to or exceeds $100 million.

Small Starts Program

- Total project cost is less than $300 million to qualify.
- Corridor-based BRT systems qualify

Bus and Bus Facilities Program[3]

- "Capital projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities, including technological changes or innovations to modify low or no emission vehicles or facilities."[4]

Other potential funding sources:

- Tax Increment Financing Districts, Urbanized Area Formula Grants, Surface Transportation Program, CMAQ Funds, Fixed Guideway Modernization

**Timeline:**

Short (Years 1-5)

- Current local bus routes are increased to high-frequency (every 15 minutes)
- Preliminary planning efforts for route are underway (feasibility analysis, community engagement)
- Ridership along high-frequency lines has increased

Medium (Years 5-10)

- Ridership along these routes are increasing, need for BRT line apparent
- Community engagement efforts continue, station location and design go through critique period with communities

Long (10+ Years)

- BRT stations have been selected and built
- Dedicated lanes have been installed
- Route is operational and is experiencing ridership numbers similar to that of the A-Line along Snelling Avenue

2 Federal Transit Administration. "Capital Investment Program." https://www.transit.dot.gov/funding/grant-programs/capital-investments/about-program (Accessed April 16, 2017).

3 Federal Transit Administration. "Buses and Bus Facilities Grants Program - 5339." https://www.transit.dot.gov/funding/grants/buses-and-bus-facilities-grants-program-5339 (Accessed April 16, 2017).

4 Ibid.


Curitiba BRT System, Brazil

City of Nantes BRT Line, France

# Recommendation: Facilitate non-motorized transportation connections between the three-city North End neighborhood and surrounding areas by constructing more bike and pedestrian-specific infrastructure.

**Explanation:**
The auto-oriented nature of the area surrounding the intersection of Rice and Larpenteur leads to an allocation of space that overwhelmingly favors the automobile. High traffic speeds along Rice Street, combined with limited dedicated paths and trails, makes the area dangerous for cyclists and pedestrians. Getting from point A to point B on non-automobile modes is extremely dangerous. Additionally, everyone is a pedestrian at some point in the day, whether walking home to their car, to the store, to the bus stop, or simply with a friend after a hard day's work. Therefore everyone will benefit from better pedestrian facilities in the corridor.

Minneapolis and  Paul are two of the premier bike cities in the United States. More and more people are choosing to get around using their bicycles, thanks in part to high-quality and interconnected facilities and infrastructure. The areas adjacent to the Rice and Larpenteur intersection provide many great amenities that enhance the quality of life of local residents: local parks and lakes, the Como Zoo, downtown  Paul, the Rice Street commercial corridor, the Roseville Mall, and Wheelock Parkway, which will become part of the  Paul Grand Rounds Trail. As it traverses over the railroad tracks just north of Ivy Avenue West, Rice Street serves as the only point of crossing between the neighborhood surrounding the intersection and the City of Saint Paul and other destinations further south. It is critical that the pedestrian and bicycle infrastructure surrounding Rice and Larpenteur be developed and connected with these amenities. This will give local residents safe multimodal access, and will entice people from other neighborhoods to explore the amenities of Rice and Larpenteur and the North End neighborhood.

**Metro Transit:**

- Provide support to local municipalities in the form of planning and financial analysis expertise.
- Find ways to entice municipalities to construct their own small area plans for this intersection and surrounding area, if they have not done so already.
- Provide educational materials for local communities .
- Support the expansion of bike and walking trails in the area in coordination with the expansion of transit projects.
- Partner with local bike and pedestrian advocacy groups to legitimize the necessity for more and safer multimodal route options.

**Anticipate Problems:**

- Drivers and Local Opposition: Drivers may dislike an increase in roadway space for cyclists. Furthermore, residents may raise concerns about off-street bike paths adjacent to their properties--fearing that it will become a nuisance.
- Bicycle Use to Justify Investment: Possible questions from skeptics: Is it a justifiable investment? Would increased bicycle infrastructure increase demand?
- Safe and High Quality Infrastructure: It may be a challenge to provide safe and quality infrastructure for cyclists and pedestrians on Rice Street, as it is the only roadway that passes over the railroad tracks located just north of Ivy Avenue We

**What if we do nothing:**

The Rice and Larpenteur intersection will continue to be dominated by automobiles. It will continue to serve as a barrier to cyclists and pedestrians hoping to access their neighborhood by alternative means. Biking and walking along the roadways adjacent to the intersection will be dangerous and will deter cyclists and pedestrians from exploring the area. It will be challenging for residents who live in the neighborhoods to the south, west, and northeast of the intersection to bike or walk safely to the amenities of Rice and Larpenteur. Developers, keen on getting involved in bike and pedestrian-focused developments, will continue to lose interest in the site. This lack of interest will not only hurt the local residents and continue trends of disinvestment in the area, but it will also make any sort of transit-oriented development nearly impossible, as developers play a key role in this process.

**Who Manages:**

The cities of Saint Paul, Maplewood, and Roseville are responsible for these infrastructure and connectivity improvements. Metro Transit

should be in charge of lobbying and supporting the municipalities to apply for grant funding and should serve as a central figure in maintaining common goals.

**Funding:**
Safe bike trails and high quality sidewalks and paths are costly to build and maintain. The Saint Paul Bicycle Plan states that the typical costs, per mile, of various types of bike facilities are the following:[1]

| Bikeway Facility Type | Estimated Implementation Cost (Per Mile) | Estimated Annual Maintenance Cost (Per Mile) |
|---|---|---|
| Off-Street Paths | $1,500,000 | $12,000 |
| In-Street Separated Lanes | $30,000 | $8,000 |
| Bicycle Boulevards | $500,000 | $16,000 |
| Enhanced Shared Lanes | $21,000 | $6,000 |

For pedestrian facilities, costs have been determined to be the following:
- $5 per square foot for sidewalks
- $30,000 for median refuge islands and crosswalk barriers
- $10,000 per intersection to add pedestrian countdown timers

Funding sources for these facilities could include the following:
- Metropolitan Council Regional Solicitation
- Minnesota Department of Natural Resources Parks and Trails Legacy Grant Program
- Minnesota Department of Natural Resources Local Trail Connections Program
- MnDOT State Transportation Improvement Program grants
- Safe Routes to School Program

**Timeline:**
Short (Years 1 to 5):
- Coordinate multi-modal transportation access with other goals, such as increasing park and green space access.
- Alternative transportation grant funding has been obtained
- Routes for trails and on-street facilities that connect to surrounding amenities have been planned

Medium (Years 5 to 10):
- Bike paths along residential routes surrounding the intersection

1 City of Saint Paul. "Saint Paul Bicycle Plan." 2015. https://www.stpaul.gov/sites/default/files/Media%20Root/Public%20Works/Saint-Paul-Bicycle-Plan.pdf (Accessed March 28, 2017).

have been built and now connect with the Wheelock Parkway and the Grand Rounds Trail.
- Safer and more protected pedestrian crosswalks have been installed along Rice Street.
- Dedicated off-street trails have been constructed, connecting the intersection to the Grand Rounds Trail, local parks and lakes, and downtown Paul.

Long (Years 10 to 20):
- A pedestrian and bicycle-only bridge has been built adjacent to Rice Street as it traverses the railroad tracks north of Ivy Avenue West, similar to the Martin Olav Sabo Bridge in Minneapolis.

Bicycle and pedestrian facilities in Seattle (top and bottom left) Portland (top right) and Minneapolis (bottom right).

# Economic Development

The central component of a successful TOD is healthy, vibrant economic development surrounding the station. This section proposes site-specific recommendations for economic development for the communities around the intersection of Rice Street and Larpenteur Avenue. Economic development offices of the State, Metro Transit, cities, community organizations, non-profits, and private developers and business owners should work collaboratively to make the community a great fit for economic development.

# Recommendation: Create Opportunities for Small Business

Cities should strive to support small business growth through collaborating with micro-lenders, community development corporations, and pro bono or low cost business training organizations. One such organization is the Minnesota Department of Employment and Economic Development (DEED). Creating a strong network of partners could provide the residents of the neighborhoods around Rice and Larpenteur with access to a wealth of resources.

- City and community partners could identify vacant parcels or underutilized land and work to pair tenants with the space
- Design and fund workshops and trainings for entrepreneurs on how to craft a robust business plans, access funding, and obtain other resources.

**Explanation:**
Small businesses are essential to local economic development and vitality. They serve as destinations, provide employment opportunities close to home, and promote active street life. There are few small businesses located in close proximity to the intersection at Rice and Larpenteur. Much of the undeveloped land is dedicated to parking lots or is currently vacant. To transform these spaces into opportunities that allow small businesses to thrive, a variety of strategies will be necessary.

Outside of having a viable idea and clientele base, the cities can provide the immigrant population living at Rice and Larpenteur the resources to begin to establish successful businesses. The cities should identify land that is prime for development., Without this support, small businesses will struggle.

Other resources and potential city partners include:

- Small-business Incubator (a small-business incubator and training center will be open in Saint Paul in the summer of 2017)
- The State's Small Business Assistant Office
- DEED funds allocated for micro-enterprises and small businesses
- SCORE, a national nonprofit organization dedicated to the formation, growth and success of small businesses
- The Asian Economic Development Association (AEDC) that provides counseling and training to new and existing business owners

**Metro Transit Recommendations:**

- Make preparations for the high volume of visitors to the neighborhood by providing more high-frequency transit options, improving bike facilities, and increasing safety measures for pedestrians and passersby.
- Advertise partnerships with small businesses. Advertising on transit could provide an effective and efficient way to raise brand awareness of the business across the metro area. Metro Transit could partner with small businesses and offer discounted prices for transit advertising.

**Anticipate Problems:**

- Availability of land: small business owners might face challenges from the unsupportive zoning regulations and complicated procedure of land acquisition for their businesses.
- Entrepreneurs having limited equity: small businesses can be very vulnerable and difficult to stabilize because of the limited cash resources of the business owner.
- Engagement and outreach: language or cultural barriers may pose problems when engaging with some small businesses owned by immigrants and ethnic populations.
- Displacement: small businesses can attract many people to the neighborhood, which might increase the commercial due to the high volume of activities in that area. The existing small businesses could then be priced out of the neighborhood.

**What happens if we do nothing:**

Business growth will remain stagnant at Rice and Larpenteur. People will not consider the area when trying to establish their business. The destinations and community gathering spaces created by small businesses will not meet community needs, possibly impacting the vitality of the neighborhood and community pride as well.

**Who Manages:**

- The cities of Saint Paul, Maplewood, and Roseville
- Local Community Development Corporations (CDC)
- Local Chambers of Commerce

**Funding:**

- Department of Employment and Economic Development Grant. For example, the Emerging Entrepreneurs Fund primarily supports micro-enterprises and small businesses with fewer than 50 employees, targeting minority and women-owned businesses, as well as those located in economically distressed areas.
- Micro-lending institutions: African Development Center,

Hmong American Partnership, Impact Seven Inc, Neighborhood Development Center, Women Venture, etc.[1]

**Timeline:**

Short (Year 1 to 5):

- Potential sites for small business residency are identified
- Cities pass supportive zoning and permitting to reduce costs of small business start up.
- Cities market the potential opportunities and support services available to developers and business owners.
- Training for business owners and employees begins.

Medium( Year 5 to 10):

- Offices from different jurisdictions and organizations help small businesses find capital and technical support during their early stage of operation.
- New businesses begin occupying previously vacant space

Long (Year 10 to 20):

- Government departments and organizations collaboratively support the stabilization and improvement of the small businesses.
- Small business community within the neighborhood is thriving and has seen 10 years of continual growth

Images from the Twin Cities Makers Space

1 US Small Business Administration, list of Participating Microloan Intermediary Lenders: https://www.sba.gov/sites/default/files/articles/microlender-rpt20170403.pdf (Accessed April 16, 2017)

# Recommendation: Invest in Skill Training Opportunities

- Collaborate with local manufacturers to design a makerspace (a pipeline for skill building which can lead to employment opportunities).
- Collaborate with a local community college to establish a health science satellite campus.

**Explanation:**
The neighborhoods around the intersection of Rice and Larpenteur have unemployment rates between 12.7 and 15.5 percent. Comparatively, Saint Paul's citywide unemployment rate is 3.7 percent. To reduce this percentage, it is imperative that the three cities create opportunities for residents to gain the necessary skills to access higher paying jobs.

We recommend two solutions: a makerspace and a satellite campus. A makerspace provides the equipment, tools, learning software, and training opportunities at a low co To maximize the opportunity of this space, the cities ought to partner with local manufacturers to lead trainings. Through these classes, the manufacturers and companies would be able to hire employees directly out of their classes. Outside of this arrangement, a makerspace can take the form of loosely-organized individuals sharing space, tools, for-profit companies, nonprofit corporations, organizations affiliated with or hosted within schools, universities or libraries, and more.

In addition to the makerspace, a long term vision would be to establish a satellite nursing campus for a local community college near the intersection. This would be an ideal location for the campus given the diversity of the nearby neighborhoods. As Minnesota and the United States approach a minority majority, it is imperative that there are health care workers who speak multiple languages. A potential partner for this campus could be the Saint Paul College. The College has a Nursing Assistant Home Health Aide Certificate, which offers traditional in-class courses on the campus, as well as off-site clinical training at various Metro locations.

The campus would also draw people from farther locations. This would make the intersection a destination for people to spend time and money at the local businesses. Woven into the structure

of the makerspace and nursing campus is the belief that if current residents can access these job training opportunities and directly benefit monetarily, residential displacement might be mitigated.

**Metro Transit Recommendation:**
Coordinate with the cities and potential partners to provide transit routes with higher frequency and quality to serve the satellite campus and increased interest in the area. Promote the programs through on-board advertising campaigns.

**Anticipate Problems:**
- Availability of land and parking space for the campus: To attract a satellite campus to the intersection may be challenging if there is not enough space for the building and required parking.
- Funding options and opportunities: It may be challenging to fund the development if the college partner and the municipalities have limited resources to support the construction of the campus.
- Accessibility via public transit: Students attending a college, as well as people needing a makerspace for job training, would mostly be low-income and transit-dependent. However, given that there are limited transit routes serving Rice and Larpenteur, the accessibility for the makerspace or satellite campus will be a problem if transit service frequency improvements do not occur.

**What if we do nothing:**
If the cities do not take a proactive approach to addressing the unemployment rate in these areas, the unemployment rate may continue to plunge. Local residents will not be able to test their ideas and businesses in a way that could become viable long term.

**Who Manages:**
Public/private partnership between local municipalities and local businesses and organizations

**Funding:**
- Centers for Disease and Control and Prevention Grants: The grant can fund research and non-research public "health programs that advance the Agency's public health mission domestically and abroad to keep Americans safe and healthy where they work, live and play."
- Private investments: The college could collaborate with private developers who invest capital funds in exchange for access to student-generated or other campus-generated revenues. This could include building and managing student apartments and bookstores. On the other hand, members of the makerspace will

contribute to part of the operation funding for the space through a monthly or annual membership fee.
- Philanthropy: Donations would form a section of the funding sources for the satellite campus and makerspace.
- Funding from affiliated schools to support the satellite campus:
- Municipal incentives: direct monetary assistance, grants or loans, tax or fee reductions, etc.

**Timeline:**

Short (Year 1 to 5):
- Identify potential sites for the makerspace and/or the nursing satellite campus; search for potential partnerships

Medium (Year 4 to 15):
- Establishment of the makerspace and/or the satellite campus; marketing campaign to promote the space.

Long (Year 15 to 20):
- Evaluate the investment to see if the projects led to a significant reduction in unemployment. Determine ways to continue to improve local employment rates.


Images from Mississippi Market

# Recommendation: Develop a Commercial Kitchen Space

Develop a small commercial kitchen open to the neighborhood. The space shall be used by both community members and small businesses. It will act as an incubator space for local entrepreneurs. Depending on community needs, the space could also include a co-op grocery store or restaurant.

**Explanation:**
One of the barriers to starting a food-based business in the neighborhood is the lack of affordable facilities to prepare food in a commercially-licensed space. A commercial kitchen space would be especially helpful for people looking to start businesses to serve minority communities that do not have many options for culturally appropriate food. The space would also serve as a magnet for visitors to the community. People outside the neighborhood could come to shop at ethnic grocery stores and dine at local and unique restaurants. An incubator space also serves as a job creator, both for entry level work and management positions.

**Metro Transit Recommendation:**
Awareness of activities and coordination for special events that need more transit service; promotion and marketing of the space and programs in Metro Transit facilities.

**Anticipate Problems:**
- Finding a suitable space: Rehabilitation of existing space: renovating up to city code for commercial food service
- New construction: locating appropriate vacant parcel(s), higher construction costs
- Determining existing gaps in food network in the community: extensive market analysis and community engagement will be necessary to determine the food needs in the community. Currently there is little high-frequency transit service north of Larpenteur that would connect the neighborhood to the community garden and two grocery stores north of Saint Paul. Residents, especially those who are transit-dependent, may not have access to affordable and healthy food. This can lead to health and economic problems both for individuals and the community.
- Marketing the facility to the people who could most benefit from

using it - especially for non-English speaking populations.

**What if we do nothing:**
The barrier for entry to the food market will continue to be high, resulting in fewer food options in the neighborhood. Immigrants/ small businesses will still exist, but it will be harder for them to enter markets and stay profitable. Doing nothing will also result in missed job training and creation opportunities, which could lead to further displacement of current residents as the neighborhood redevelops.

**Who Manages:**
CDC/non-profits, co-ops running the facilities. Ideally the facility would be created and operated by the community itself, with technical assistance from outside parties.

**Funding:**
- CDC grants, private support, and restaurateur start-ups
- cities can offer technical assistance

**Timeline:**
Short term (Years 1-5):
- Determine current space needs; basic training for financing and business management (including developing training and technical assistance materials in all languages spoken by community members)

Medium term: (Years 5-10):
- Identify reliable tenants and financing, as well as resources for tenants to be successful when they grow out of the space and program. Optional: Renovation of existing space into commercial kitchen

Long term (Years 10-20):
- Construction of new commercial kitchen space, retail space to sell goods made on site, and potential restaurant space, along with space for educational and supporting uses.

The three sections of **Community Now/ Community Later**, T**ransportation**, and **Economic Development** are a platform, which if adopted, can help to shape the intersection at Rice and Larpenteur into a dynamic TOD site. Coupled throughout these action steps is the need for community engagement and collaboration to ensure that the actions suggested meet the needs of current and future residents at the intersection. The actions suggested, while specific, have illustrated positive impacts in increasing economic and social opportunity in other places.

The hope is that these recommendations can be repurposed and used at Rice and Larpenteur. The question is, are there ways to tweak these actions to maximize the community impact? For instance, is a hockey rink and a futsal court the best recommendation for the large Hmong community living near the intersection? Or could this proposal evolve to include a community center and outdoor activity space? **These questions and ultimate outcomes are in the hands of the community, three municipalities, Metro Transit, and other partners that will lead the redevelopment process.**

# Conclusions

To conclude this TOD capstone, it is fitting to return to Metro Transit's TOD guiding goals. Those are:

- To maximize the development impact of transit investments by integrating transportation, jobs, and housing.
- To support regional economic competitiveness by leveraging private investment.
- To advance equity by improving multimodal access and opportunity for all.
- To support a 21st-century transportation system through increased ridership and revenues.

Broadly, the capstone's objectives of evaluating land allocation at existing and future TOD sites, identifying the components that support successful TOD in the Twin Cities region, and proposing feasible and relevant recommendation to transform the intersection of Rice and Larpenteur into a TOD node were achieved.

Specifically, this project determined that measuring the ratio of space allocated for vehicles, buildings, and people can be used as an intriguing analysis tool, but yields no viable 'golden ratio' to drive current policy and future TOD development. On the other hand, it is potentially a useful engagement tool. The ratio can help people take a step back and see where they live in a new light.

Moreover, the capstone project identified essential opportunities for the cities of Saint Paul, Maplewood, and Roseville, Ramsey County, and Metro Transit to make targeted investments and commitments to the intersection of Rice and Larpenteur.

These objectives and results advance the TOD Office's goals. In particular, the action plan strategically combines policies regarding 21st-century transportation systems, access to jobs, entrepreneurial opportunities, and a range of housing options. Investing in the communities at the Rice and Larpenteur intersection will be a catalyst for strengthened economic competitiveness in the region.

For future research, it would be advantageous to explore the specific tactics and language used to market TOD in the suburbs. This is a critical constituency that can often oppose TOD. The land allocation metric should be put to the test in cooperation with other engagement techniques.

The Rice and Larpenteur plan is a bold vision. However, if TOD in the Twin Cities is going to seize upon this opportunity, it will require adopting these or similar actions. The intersection of Rice and Larpenteur is a great starting point. While decades of car-centric, suburban sprawl quenched our thirst for open space, it has also deposited countless decaying strip-malls across the Twin Cities region.

If a node like Rice and Larpenteur can be transformed into a walkable, healthy, and accessible area, the foundation for revitalizing nodes like it will have been set in the region. It is our belief that taking these critical steps will take Rice and Larpenteur from simply a place to live, to a place to thrive.

# Appendix

# A. Stakeholder Interviews

## Interview Questions

**Behavior/Background/Education**
- Who are you?
- What is your background (educational/personal/work)?
- What do you do in your role?
- What are your responsibilities?

**Opinions/values**
- How did you get into your position?
- What are the values that guide your work?
- What is your philosophy on TOD?

**Feelings**
- How do you feel about current TOD efforts in (Twin Cities, Nationally, internationally)?
- What's the future of TOD in the US, in your opinion?
- Do you think that people understand TOD?
- Do you think that non-planners (everyday people) understand/ want the benefits that come with TOD?

**Knowledge**
- What is your experience with TOD?
- What are the barriers/challenges to TOD in your area?
- How do you evaluate a site that is prime for TOD?
- How do you measure successful TOD?
- What needs to be present for a TOD to be successful? Sites? Support?

**Sensory**
- What conversations have you had with lay people about TOD?
- What has the feedback been from that?
- What does TOD smell like to you?
- What does TOD feel like to you?
- What does TOD look like to you? Before it is there? After?
- How have you observed people interacting/using/living in a TOD?

# Interviewees

**David Frank, Director of Economic Policy and Development, City of Minneapolis**

- The best way to get something done is to make it easier.
- Policy needs to make transit the easiest transportation option possible; this involves development practices.
- Connections between transit modes and between all land uses (office, commercial, housing, retail), should direct and accessible.
- Currently, policy makers are not willing to inconvenience drivers.
- In MSP, development needs to focus along transitways in order to not disturb single-family neighborhoods.
- Those developing TOD need to be careful about how they talk about TOD with constituents living close to the potential development.

**Jeff Wood, Principal, The Overhead Wire, San Francisco**

- It is hard to get people to think differently and accept new things/change
- Incentives for developers are crucial- this policy has to be top quality
- TOD should be places where pedestrians are valued, that has a sense of place, and that "feels" right; a place of constant activity: the 24 hour neighborhood
- Great TOD is happening accross the US (Denver, Portland, Dallas, Charlotte, MSP…)

**Cara Letofsky, Council Member, Met Council**

- TOD happens faster when on public land
- Development funding is always a challenging problem
- Private/Public Partnerships are critical
- TODs cannot exist as simply a station; they must be connected with/to the surrounding area and district

**Jon Commers, Council Member, Met Council**

- Everything should be transit accessible (housing, commercial, retail, jobs, etc)
- Zoning around transit should be more flexible to allow for easier TOD
- Partisan divide: some people/policymakers feel as though they are being coerced into supporting TOD
- The term "TOD" needs to change and be more easily

comprehended for non-planners- can lead to more understanding and acceptance of the benefits of TOD

**Sam Newberg, Transportation Professional, www.joe-urban.com**

- "Let's make it easy to do TOD" - Sam Newberg
- Good design is good design, regardless of transit. Laypeople can "sense" when they're moving through a well-designed space
- Qualitative studies & measuring livability
- Don't become complacent with "good enough" design - we should strive for excellent design, like how our cities were built historically (example: streetcar neighborhoods)
- Barriers to good TOD: financing, lack of infrastructure (example: street trees), land use and zoning code doesn't reflect the more progressive views of city planning staff

**Mariia Zimmerman, MZ Strategies, Washington D.C.**

- Zoning and regulatory statutes can be great tools, but they can also be a great hindrance to a quality TOD
- Community conversations are critical to understand their needs and wants and how a TOD (and cascading effects of a TOD) can come to benefit them and enhance their quality of life
- Pro-TOD leadership and advocates are crucial in producing world-class TODs. Without this, the benefits of TOD are whittled away
- TOD design needs to be functional, have direct connections, and be pedestrian oriented; can be good for everyone, even car users

**Tom Fisher, Director, & Bruce Johnson, Senior Research Fellow, Metropolitan Design Center, University of Minnesota**

- Fixed investment for LRT is more expensive than BRT in the Twin Cities
- The cities and region talk the talk, but they don't follow up with action
- Twin Cities perceived as being an innovation oriented community from the outside, but not in reality
- More experimentation needs to occur to attract outside interest

**Libby Starling, Manager, Regional Policy & Research, Met Council**

- Fear of change is a barrier to TOD: neighborhoods resist change, which is human nature
- Successful TOD means increased tax base, continues to attract

additional development, serves local transit
- In local conversations, LRT is better than BRT because it carries a higher level of confidence from residents. BRT is better for the casual rider.
- Developers are interested in developing along transit lines, suggesting transit should come before development.

**Jamie Radel, Senior City Planner, Saint Paul MN**
- The three cities and Ramsey County have begun a joint planning process (pre-master plan stage), including committing resources and hiring a consultant.
- Food access for transit dependent residents is limited; there are two grocery stores and a new community garden north of the intersection, but currently no high-frequency bus service north of Larpenteur.
- North of Larpenteur does not have a lot of bicycle, pedestrian or transit connectivity. The Rice & Larpenteur neighborhood does not have good East/West transit connections.
- Zoning should be upgraded to higher density, mixed-use districts like the Traditional Neighborhood Districts in Saint Paul.

# B. Vision

To envision the future of the Rice and Larpenteur intersection, our group sketched a future theoretical narrative of the site. Our main character, Terrance, has recently moved to a multi-family housing development near the intersection. The Vision statement describes his daily life and feelings towards living at the intersection. The piece also articulates some of the policy and action steps that the cities of Saint Paul, Maplewood, and Roseville would theoretically take to make the site a transit-oriented development.

## The Great Northern Neighborhood: 2040

Terrance checks to see if the door to his ground floor apartment is locked, and waves to the kids next door. Maria and Tomas are drawing hopscotch squares on the sidewalk just like he taught them the week before. While walking the two short blocks to MacLaren's Pub at the southwest corner of Rice and Larpenteur, the excitement to see his good friend Al grew. Living in Atlanta, Al is in town for an Army reunion. The two greet each other enthusiastically, order drinks and grab a booth in a corner to catch up.

Over the last year and a half, a lot has changed for Terrance. He sold his house in White Bear Lake after his wife, his primary caretaker, passed away, and moved to a ground floor apartment a block west of the intersection of Rice and Larpenteur. Moving to this apartment has been a significant lifestyle change for Terrance. For 30 years, he drove to and from work at the 3M campus. Living in the definition of a bedroom community, he knew his neighbors from the occasional rendezvous at the cul-de-sac mailbox and in passing on his John Deer lawn mower. Terrance was concerned that moving to an urban neighborhood would mean he wouldn't have contact with his neighbors. To his surprise, he quickly met other folks in the community, and he now talks to his neighbors on a regular basis.

Driving is no longer an option for Terrance due to his poor eyesight. Walking and public transit satisfy his daily transportation needs and are much safer for a person at his age. Despite those changes, he tells his friend Al, he can still do everything he used to do, which he finds more enjoyable than before. He continues to be active with

the Elks Club, which can be easily accessed by transit or on foot. There's a Denny's just two blocks away from his apartment where he can get to know what's going on in his community through casual chatting with his neighbors. He even found a maker space stocked with wood and metal working tools at the Rice and Larpenteur intersection. Terrance used to spend hours in his garage workshop making wooden toys. Now he shares his expertise with young folks like Holden, who in turn explain to Terrance the finer points of homebrewing. The maker space even has manufacturing classes that local employers hire students from.

Terrance also spends more time with his grandkids than he ever has before, because his new residence is closer to his kids' homes: one grandchild walks to visit him, while another grandkid takes the bus rapid transit to see grandpa. When it comes to the bus, Terrance cannot help telling his friend Al about how it has helped him bond with his granddaughter, Marta. She's a huge hockey fan, so recently Terrance decided to take her downtown to see a Minnesota Wild hockey game. He hasn't seen professional hockey the North Stars left town in 1993. Due to the great location and connectivity of his new neighborhood, Terrance was able to take Marta to the game using only the bus rapid transit. Terrance told Al how much fun he had spending time with Marta, and about his new cultural food discovery: poutine.

While Terrance is describing how great his new life is, Jaromir, the local butcher, walked into MacLaren's Pub. Terrance invited Jaromir to join them. "I always walk to Jaromir's store to buy their local grass-fed Angus beef," Terrance tells Al, "I believe he has the best butchery skills!" Terrance continues to describe how this neighborhood has introduced him to new experiences he could not find in his old suburb. He had his first bowl of pho at the Vietnamese restaurant one block away from the pub; he was invited to a neighbor's house to taste her grandma's tamales, and for the first time, he found convenient and enjoyable to ride the bus.

Once Jaromir left, Terrance and Al reflect on how their lives have changed since the Army days. After sustaining several injuries during his tours of duty, Terrance required surgeries and physical therapy later in his life. Due to his weaning eyesight, he lost the ability to drive himself to medical appointments and began to losing his sense of independence. When his wife passed away, he rarely, if ever, left his home without the help of his children. Al also complains about suffering the same problems with his health and his loss of independence. Terrance's face lights up in excitement

when telling Al how much more active and independent he has become since moving to his new apartment. Now, he walks to his medical appointments, the food coop, and the pub. He's amazed by how many of his needs are close to him. He remembers when the Rice and Larpenteur intersection was just parking lots and one-story stores. Since then, the cities of Saint Paul, Maplewood, and Roseville came together to ultimately rezoned the area to encouraging two-story mixed use development that complimented the bus rapid transit. There are few parking lots left.

After parting with Al at the bus rapid transit platform, Terrance walks back to his apartment. When he arrives, he sees his new next door neighbors Rico and Sydney, who recently graduated from college on the West Coast and got hired at 3M. Terrance and his neighbors exchange a few words before heading inside. He's amazed at how much the 3M campus has changed since he retired. Getting ready for bed, Terrance reflects on what his life might have been like if he, like Rico and Sydney, had lived in an urban neighborhood like this when he was younger. He has no regrets; Terrance is just glad that a community like this exists for him at this stage in his life. And thanks in no small part to the amenities and community of his new home, he feels pretty good for an eighty-year-old.

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# D. For Further Reading

For further reading on the case studies we used for the recommendations in the Action Plan, see the following resources:

## Community Now/Community Later

**Recommendation: A Wider Variety of Housing Types**
Claisebrook Village, Australia[1]

- An urban village development that boasts affordable housing units and contemporary townhouses and apartments, along with restaurants, shops, and offices.

**Recommendation: Increased Park and Green Space Access**
Springwater Corridor, Oregon[2]

- A multi-use, paved trail with soft shoulders.
- A segment of a 40-mile loop, the corridor originates from the City of Portland's 1903 Olmsted Plan "of a parkway and boulevard loop to connect park sites."[3]
- A Rails to Trails project.

Off-street bike trails along the Wheelock Parkway Grand Rounds Scenic Byway System, Minnesota[4]

- Approximately 50 miles of parkway.
- The Grand Rounds National Scenic Byway is part of the Federal Highway Administration
- "One of the country's longest continuous systems of public urban parkways"[5]

1 Metropolitan Redevelopment Authority. "Claisebook Village". http://www.mra.wa.gov.au/projects-and-places/claisebrook-village (Accessed April 11, 2017).
2 City of Portland. "Springwater Corridor" https://www.portlandoregon.gov/parks/finder/index.cfm?action=ViewPark&PropertyID=679 (Accessed April 14, 2017).
3 Ibid.
4 Minneapolis Park and Recreation Board. "Grand Rounds Scenic Byway System. "https://www.minneapolisparks.org/parks__destinations/trails__parkways/grand_rounds_scenic_byway_system/ (Accessed April 14).
5 Ibid.

## Transportation

**Recommendation: Install Traffic Calming Measures**
Riverside Avenue, Minneapolis, MN
Lyndale Avenue, Minneapolis, MN
Bike/pedestrian road crossings

**Recommendation: Implement Bus Rapid Transit Along Rice Street**
Curitiba BRT System, Brazil
City of Nantes BRT Line, France
Snelling Avenue A-Line BRT- Paul, MN

**Recommendation: Facilitate non-motorized transportation connections between the North End and surrounding neighborhoods by constructing more bike and pedestrian-specific infrastructure.**
City of Minneapolis/City of Saint Paul Bicycle and Pedestrian Plans
City of Portland Bike Plan
Broadway Street Pedestrian and Bicycle Infrastructure, Seattle, WA

## Economic Development

**Recommendation: Create Opportunities for Small Business**
Small Business Growth Strategy, City of Chicago[6]

- Strategy 1: Empower local chambers of commerce to deliver customized business counseling.
- Strategy 2: Foster neighborhood engagement with the local business community.
- Strategy 3: Drive neighborhood economic vitality by attracting businesses to targeted locations and corridors.
- Strategy 4: Enlist existing small businesses in making their neighborhoods safer for future businesses and investments.

Rockwood Town Center Redevelopment, Gresham, Oregon[7]

- The 5.5-acre site is being developed into nearly 100,000 square feet of new commercial, office, and retail space in Oregon's most diverse and lowest income neighborhood.
- The site plans to have small leasable incubator spaces for food entrepreneurs.
- The site will also have job and skill training/certifications, a television studio and digital innovation lab, technology shop/ makerspace, shared creative workspaces, and small business development resources.

6 "Neighborhood Small Business Growth Strategy" City of Chicago. https://www.cityofchicago.org/content/dam/city/depts/bacp/Small%20Business%20Center/smallbusinessstrategy.pdf (Accessed March 28, 2017).
7 Gresham Redevelopment Commission. "Rockwood Rising." 2016. http://www.rockwoodrising.com/ (Accessed March 28, 2017).

**Recommendation: Invest in Skill Training Opportunities**

- Twin Cities Maker is a community group based in the Twin Cities metro area and is funded by member fees and donations. The group operates a cooperative community "maker shop" (or "maker space") for members to build projects using various media and technologies, from wood and metal working to electronics to fabrics and beyond.[8]
- Arlington Hills Library[9] is one of the branches of the Saint Paul Public Library and is located in the Arlington Hills neighborhood. It provides a variety of education opportunities for the neighborhood, including:
  - The Community Learning Center which offers homework help, job search assistance, computer classes, finance classes and more;
  - Createch Studio which provides digital learning lab for teens.
  - The Community Learning Center also provides Basic computer instruction in English, Karen, and Spanish.

**Recommendation: Develop a Commercial Kitchen Space**

Mississippi Market (local co-op, Paul)[10]

- Classes and resources for people to develop skills

Kindred Kitchen (commercial kitchen space and business technical services, Minneapolis)[11]

- Kitchen rental space, community collaboration, entrepreneurial space

Gia Kitchen (commercial kitchen space, Paul Como Neighborhood)[12]

- 4,800 square foot commercial kitchen space that can hand production demands for most start-ups and food entrepreneurs.

Good Acre[13]

- non-profit "food hub facility" that contains a warehouse, teaching kitchen, and classroom. Programming includes cooking classes and a CSA focused on supporting local, low-income, immigrant, independent farmers.

8 Twin Cities Maker at the Hack Factory. http://www.tcmaker.org/blog/ (Accessed March 28, 2017).
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